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ABSTRACT

A growing number of schools are exploring the prospect of applying for funding to implement a Comprehensive School Reform (CSR) model. But the process of selecting a CSR model can be complicated because it frequently involves self-study and a review of models to determine which models best meet the needs of the school. This study guide is intended to help schools engaged in reviewing CSR models. The introduction focuses on selecting reforms for further study, how schools can get started in selecting a reform approach, how CSR models involve teachers in research, relating CSR models to state standards, comparing CSR models, and how to use the guide. The guide goes on to provide additional information for school-based teams interest in studying reform models, especially for schools in Minnesota, and provides detailed information on 10 CSR models: (1) Accelerated Schools Project; (2) America's Choice; (3) ATLAS Communities; (4) Early Intervention in Reading; (5) First Steps; (6) Lightspan Achieve Now; (7) Modern Red Schoolhouse; (8) School Development Program; (9) Success for All; and (10) Talent Development Career Academies. Appended are definitions and examples of program features mentioned in the guide and summaries of Minnesota reading, math, and inquiry standards. (WFA)

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Comprehensive School Reform Models:

A Study Guide for Comparing CSR Models (And How Well They Meet Minnesota's Learning Standards)

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Comprehensive School Reform Models:
A Study Guide for Comparing CSR Models (And How Well They Meet Minnesota's Learning Standards)

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Introduction

A growing number of schools are exploring the prospect of applying for multiyear funding to implement a Comprehensive School Reform (CSR) model. CSR models are systemic, research-based reforms that involve the entire school community in a restructuring process intended to improve student learning outcomes by strengthening the school's capacity to meet the needs of students and involve parents in meaningful ways in student learning and the reform process. Many of the CSR models provide opportunities to involve community groups in the school improvement process, if not become partners in the reform. However, the process of selecting a CSR model can be complicated, since it frequently involves self-study, as well as a review of alternative reform models to determine which model best meets the needs of the schools. This Study Guide is intended to inform schools engaged in reviewing CSR models. Specifically, this Study Guide focuses on:

- **Selecting Reforms for Further Study**: How can schools get started in selecting a reform approach?
- **Research-Based Reforms**: How do CSR models involve teachers in research?
- **Relating CSR Models to State Standards**: How well do the CSR models match Minnesota's learning standards?
- **Comparing CSR Models**: How do the features of CSR models compare?
- **How to Use This Study Guide**

Selecting Reforms for Further Study

How can schools get started in selecting a reform approach? Schools considering possible CSR models have many choices to make about how to go about choosing a reform model. Schools seeking funding through CSR can choose: 1) to develop their own reform model, possibly combining elements from different sources; 2) a process-oriented model that involves the school in developing their own distinctive approach; or 3) a field-tested method that can be implemented without substantial local adaptation. Regardless of the approach taken, the selection of a reform model should be guided by nine criteria that the federal CRS Program intends for schools to meet:

1. Comprehensive design with aligned components
2. Support within the school
3. Measurable goals and benchmarks
4. Effective, research-based methods and strategies
5. Professional development
6. External technical support and assistance
7. Parental and community involvement
8. Coordination of resources
9. Evaluation strategies

Getting Started

There are a number of resources available to schools interested in choosing a reform model. In *Comprehensive Reform: Making Good Choices* (available online[1]), the North Central Regional Educational Laboratory (NCREL) proposes a four-step planning process:

- **Step One: Laying the Groundwork.** Creating a process that involves stakeholders in making decisions about comprehensive reforms.
- **Step Two: Evaluating Your Current Situation.** NCREL provides a framework for assessing overall student performance and of specific subgroups, assessing the school program, assessing the environmental support for reform, and summarizing the self-evaluation.
- **Step Three: Profiling Your Comprehensive Approach.** NCREL suggests a process for developing a concise statement of what the school is looking for in a CSR approach, especially related to goals for teaching, learning, and assessment.
- **Step Four: Making a Decision.** NCREL suggests that schools select models for further study.

In addition, the Northwest Regional Educational Laboratory (NWREL) has developed a *Catalog of School Reform Models* (also available on online[2]) that reviews fifteen of the major reform models. Reviews of NWREL's catalog can help schools decide whether there are reforms that match their profile, or whether they might consider developing their own model.

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[1] North Central Regional Educational Laboratory (NCREL). (2000). *Comprehensive School Reform: Making Good Choices*. [Online] http://www.ncrel.org/csri/tools/makegood.pdf

An In-Depth Review

This Study Guide was designed to provide additional information for school-based teams interested in studying reform models, especially for schools in Minnesota. This Study Guide provides detailed information on ten CSR models. These models are:

- **Accelerated Schools Project:** A comprehensive, schoolwide reform that focuses on building capacity through inquiry (for elementary and middle schools).
- **America's Choice:** A comprehensive, schoolwide reform that includes rigorous standards, a prescribed curriculum, and reform processes for all levels of schools.
- **ATLAS Communities:** A comprehensive, schoolwide reform that uses authentic assessment and instruction in a reform process that creates a coordinated "pathway" of K-12 schools.
- **Early Intervention in Reading:** An early reading intervention (for elementary schools) with a strong research base that could be integrated into locally designed comprehensive reforms.
- **First Steps:** A reading intervention for early primary through middle school that could be integrated into locally designed comprehensive reforms.
- **Lightspan Achieve Now:** A technology based reading and math intervention that incorporates a school-improvement process that could be integrated into locally designed comprehensive reforms.
- **Modern Red Schoolhouse:** A comprehensive, schoolwide reform model that provides a process-oriented approach for developing classroom practices (curriculum, instructional, and other features) that are aligned with state standards (for elementary, middle, and high schools).

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[2] North West Regional Education Educational Laboratory (NWREL). (1998.) *Catalog of school reform models: First edition*. [Online] http://www.nwrel.org/scpa/natspec/catalog/toc.html

- **School Development Program:** A comprehensive, districtwide reform model that involves teachers and other community stakeholders in redesigning urban schools (involves district offices, high schools, middle schools, and elementary schools).
- **Success for All:** A comprehensive reform model for elementary schools that provides curriculum and instructional processes in reading, math, and science for elementary schools.
- **Talent Development Career Academies:** A comprehensive, schoolwide model that builds learning communities within middle and high schools.

Research-Based Reforms

How do the CSR models involve teachers in research? These ten reforms have designs that have been based on research about student learning and school improvement (see Table 1). However, given that researchers have examined diverse approaches to reform processes and classroom practices (instruction and organization), there are many "research-based" models. Indeed, these models carry forward many different conceptual and practical approaches to schoolwide reform and classroom practice. Five of these reform models have at least some confirmatory research (Accelerated Schools, Early Intervention in Reading, First Steps, School Development Program, and Success for All).

In addition to having designs that are consonant with some of the research on reform processes and/or classroom practice, these reforms actually engage stakeholders in the research process. CSR models might involve teachers and other stakeholders in research (see Table 1) in four ways:

- Most models involve teachers in reviewing research on educational improvement, as part of the process of reform.
- Many models involve teachers in schoolwide research/study on student achievement outcomes as part of the reform process.
- A couple of the models actually involve teachers in action-research projects that design and pilot-test local interventions.
- Increasingly, model providers and funding require participation in confirmatory research.

Table 1: CSR Models—Use of Research

	Models' Relation to Research		Models' Use of Research in Reform Process		
CSR Model	Based on Research	Confirmatory Research	Teachers Study/ Review Research	Teachers Study/ Research Schoolwide Student Outcomes	Teachers Engage in Action Research
Accelerated Schools	X	X	X	X	X
America's Choice	X		X	X	
ATLAS Communities	X		X	X	X
Early Intervention in Reading	X	X			
First Steps	X	X	X		X
Lightspan Achieve Now	X			X	
Modern Red Schoolhouse	X		X	X	
School Development Program	X	X	X	X	
Success for All	X	X			
Talent Development Career Academies	X		X	X	

Reviewing Research on Educational Improvement

Seven of the reform models examined in depth in this Study Guide actually involve teachers and other stakeholders in the process of reviewing educational research and making decisions about how the research should inform their practices. Teachers develop direct links between the research base and the reform processes in their schools. Of the reforms examined in this report, seven models have schoolwide process features that involve teachers in reviewing research:

- **Accelerated Schools** encourages school teams to review the research literature, as part of an inquiry process. Indeed, stakeholders are encouraged to use research to inform the design of local pilot tests of alternative practices.
- **America's Choice** includes process features that involve teachers and other stakeholders in the review of educational research that might help them address local, state, and national learning standards.

- **ATLAS Communities** encourages schools to review research literature to inform reform activities that could be tailored to local needs. Teachers also review research on teaching methods.
- **First Steps** emphasizes using teacher action research in the development of reading programs.
- **Modern Red Schoolhouse** integrates the review of research into the process of designing classroom practices that meet state educational standards.
- **School Development Program** encourages schools and districts to work with local universities in a process of using research to inform the school improvement process.
- **Talent Development Career Academies** involves stakeholders in reviewing research as part of the process of building learning communities (or academies) within the school.

Thus, in their own distinctive ways, these models involve teachers and other stakeholders in a process of reviewing how research might inform their school improvement efforts. In these reforms, at least some of the decisions about how the research should reform school practice are put in the hands of educators.

Two of the reforms have used the process of developing the reform through a confirmatory research process. The developers of these models have integrated confirmatory research into a field-tested model for classroom practices. These models are:

- **Early Intervention in Reading** provides a comprehensive approach to early primary reading that has been developed by Barbara Taylor and her colleagues at the University of Minnesota. They have designed an early-reading intervention model, field-tested the model, and made improvements based on the research.
- **Success for All** started as a schoolwide intervention in urban schools that focused on early reading. Robert Slavin and his colleagues at Johns Hopkins University have tested the model in experimental studies across the United States. They are currently using a similar research-based approach to test a math curriculum.

Thus, the ten models reviewed in this Study Guide vary in the extent to which they involve teachers in reviewing the research base. Seven of the reforms examined in this Study Guide involve teachers in a process of reviewing research to develop local, research-based improvement strategies. These models also include features related to classroom practices (instruction and structure/organization) that are part of the models' designs and that have a related research base. In contrast, two of the models rely exclusively on the approach of implementing specific field-tested practices (i.e. prescribed curricula or teaching methods.) Teachers in these schools learn new curricula and methods that have been field-tested. Thus, school teams are encouraged to study the CSR models so they can make informed choices about how they want stakeholders in their schools to relate to, and work with, the educational research base.

Research on Student Outcomes

Seven of the models encourage teachers to study student outcomes systematically, as an integral part of the reform (i.e., Accelerated Schools, America's Choice, ATLAS Communities, Lightspan Achieve Now, Modern Red Schoolhouse, School Development Program, and Talent Development Career Academies). These models encourage teachers to use information from formative evaluations in their efforts to adjust and adapt their classroom practices and the reform efforts at the school.

- **Accelerated Schools** compares schoolwide student performance to data originally collected through Taking Stock and to their Vision in order to refine the focus of the inquiry groups and thus the schools' reform efforts.
- **America's Choice** uses schoolwide data before each school year in planning improvement efforts (e.g. enabling students to meet the standards), such as selecting areas for professional development.
- **ATLAS Communities** uses formative evaluation data, including the authentic assessments developed by the school, to evaluate reform activities already implemented and to set the reform agenda for the coming school year.
- **Lightspan Achieve Now** uses formative evaluation information to determine how well, as a whole school, the school is moving toward meeting state standards. Teachers are encouraged to do a similar evaluation at the classroom level.
- **Modern Red Schoolhouse** designers collect formative evaluation data electronically that is shared with the school. The school uses the data to inform the Backmapping process, and adjust the curriculum already designed (through backmapping).
- **School Development Program** model includes school-level evaluation as one of three ongoing major activities of the reform. School-level information is collected

continually (rather than once a year) and is used to evaluate and redirect all reform activities.

- **Talent Development Career Academies** uses the formative evaluation to determine whether all students are successful with the college preparatory curriculum, making adjustments in their reform efforts accordingly.

Getting Involved in Action Research

While all of the models encourage reflective practice to some extent, three of the models emphasize involving teachers as action researchers:

- In **First Steps**, teachers are encouraged to conduct classroom research on how the reading interventions they have designed, based on the principles and philosophy of the program, actually influence student learning; the "action" research is used by teachers to further refine their own practices.
- In **Accelerated Schools**, stakeholders are encouraged to participate with teachers in inquiry groups that study school problems and use action research to design and pilot test new strategies. In addition, teachers are provided training in action-research methods, encouraged to engage in classroom research, and provided opportunities to network with teachers in other schools who are engaged in classroom research.
- In **ATLAS**, teachers use action research to develop, implement, and evaluate components of the reform. In addition, groups of teachers conduct classroom research to study their own practices in relationship to student learning.

These reforms more deeply integrate research into the reform design. Action research is an integral part of these models; therefore, study teams should consider whether they want to engage in a reform process that enables teachers to become action researchers.

Getting Involved in Confirmatory Research

Five of the CSR models reviewed in this Study Guide have at least some confirmatory research—studies that confirm that implementing the reform actually improves student learning outcomes. Success for All used an experimental method to develop its original reading program and is currently using a similar methodology to test its math and science programs. Early Intervention in Reading was developed through a series of action-research studies. Thus, there is substantial evidence of a confirmatory nature, at least from Success for All's early experiments with its reading program and Early Intervention in Reading's early primary reading program.

There has also been extensive research on some of the process-oriented CSR models, especially the Accelerated Schools Project (ASP), the School Development Program (SDP), and First Steps. However, since these models give substantial local discretion to teachers to select or develop a new curriculum, much of this research has focused on reform processes. In particular, there are many case studies and implementation studies for ASP, including several books. However, these studies do not constitute confirmation that implementing the features of reforms will improve outcomes. Instead, a school's success with this model depends on the impact of the specific innovations planned, pilot-tested, and adapted by teachers in their classrooms. Further, because of the high degree of local discretion in ASP, SDP, and First Steps, there is not a set of achievement tests that are closely aligned with these reforms, as there is for Success for All.

First Steps was developed in Australia where modest confirmatory research was conducted, as part of the model development process. These studies are primarily descriptive.

In addition, schools selecting any of the CSR models will probably be involved in several studies. Many of the CSR model providers are now conducting research on the impact of their models. Further, states and the federal government have funded ongoing studies of these reform efforts. Thus, schools that select a CSR model, develop a proposal, and get started in the reform process can expect to have researchers visit their schools and to have requests to fill out surveys for these purposes.

Relating CSR Models to State Standards

How well do the CSR models match up to Minnesota's learning standards? Minnesota, like most states, has developed a comprehensive set of learning standards to guide reform in the state's schools. Whether or not schools undertake CSR models, schools are responsible for meeting these standards. To assist schools with the process of assessing whether the reforms will help them meet Minnesota's standards, this Study Guide provides a review of how well the selected CSR models address the standards. The analysis (Part I) considers Minnesota standards in:

- Reading/Language Arts
- Math
- Inquiry

The review of standards illustrates how the program features (see Appendix A) relate to the learning standards. Features related to classroom practices (instruction or organization/structure features) usually link directly to learning outcomes and related learning standards, while many of the reform features have an indirect influence on achievement of learning standards. Program features (e.g. schoolwide, professional development) have an indirect influence on learning outcomes and related learning standards when the implementation of these features can influence changes in classroom practices. The analysis of standards in Part I illustrates how the program features included in CSR models will help schools address Minnesota's learning standards.

The reviews of each reform in Part I provide an analysis of the ways each reform relates to Minnesota's standards. The actual program features included in the reform models were examined in relation to Minnesota's standards. This section reveals that the reforms meet the standards in the following ways:

- **Accelerated Schools** provides a set of inquiry-based practices and a systemic reform approach that enables elementary and middle schools to address Minnesota's learning standards in reading/language arts, math, and inquiry.
- **America's Choice** provides curriculum and instructional processes that address the learning standards in reading and math, as well as provides processes that can be used to address the standards in inquiry.
- **ATLAS Communities** provides teachers with a process for developing assessment methods and curriculum that are aligned with state standards.
- **Early Intervention in Reading** provides curriculum and instructional processes that partially address the learning standards for reading at the primary and intermediate levels. This model does not address math or inquiry standards.
- **First Steps** provides a curriculum that partially addresses the reading standards for elementary and middle schools. This reading reform also includes process features that enable schools to more fully meet these standards. However, the model does not address math or inquiry.

- **Lightspan Achieve Now** provides computer-based instruction aimed at improving learning outcomes in reading and math. This can supplement schools' efforts to meet learning standards.
- **Modern Red Schoolhouse** provides an approach to developing curriculum that enables elementary, middle, and high schools to address the reading and math standards and that partially addresses the inquiry standards. The design also includes instructional processes that will allow schools to more fully meet these standards.
- **School Development Program** provides processes that enable schools at all levels to address learning standards. In addition, the model includes some early reading instruction features that will enable elementary schools to focus on early reading.
- **Success for All** provides a curriculum and instructional processes that meet learning standards for early primary in reading and partially meets these standards in intermediate reading. It also provides a math curriculum that meets standards in math in elementary schools (early primary and intermediate primary). This reform does not address the state's learning standards in inquiry.
- **Talent Development Career Academies** provides curriculum and instructional processes that meet state standards in reading/language arts, math, and inquiry (in a more limited way) for both middle and high schools.

The methods used to research these summative judgements are described in Part I of this Study Guide, along with an analysis of the ways the features of each reform model relate to the learning standards in the three areas. A glossary of program features is provided (Appendix A) that defines each feature and identifies the different reforms that include the feature. In addition, Part II identifies the designs that are embedded in each of the ten reform models, focusing on the ways the reform features actually link to system outcomes and learning outcomes in math and reading. This detailed information is provided for schools that seek to study specific reforms in more depth and to compare the reforms to the profiles the schools have developed.

Comparing CSR Models

How do the features of CSR models compare? School communities should review the CSR models that fit their school reform profile. Most of the CSR models reviewed in this Study Guide require substantial time commitments to implement the reform models. NCREL's *Comprehensive Reform: Making Good Choices* provides a well-defined methodology for this first phase of the selection process. As part of this process, NCREL recommends a school should develop a profile of their ideal reform. These profiles can be compared to the model designs described in Part II. This detailed review of the ten CSR models focuses on:

- The overall reform design: How the schoolwide process and classroom practices link to systemic outcomes (attainment/equity and achievement).
- The specific features of the reading/language arts programs included in these reforms that map to learning outcomes that relate to the Minnesota's learning standards.
- The specific features of the math programs included in these reforms that map to learning outcomes for math that relate to Minnesota's learning standards.

Comparing Model Designs as Systemic Reforms

To facilitate a comparison of the school profile to the ten reforms, this Study Guide identifies the specific features of CSR models. These features, derived from the literature on these reforms, are used as a basis for comparing reform models and depicting how the reforms address Minnesota's learning standards, as noted above.

Most CSR models emphasize implementing a process that guides the reform. The Study Guide reviews *reform features* related to:

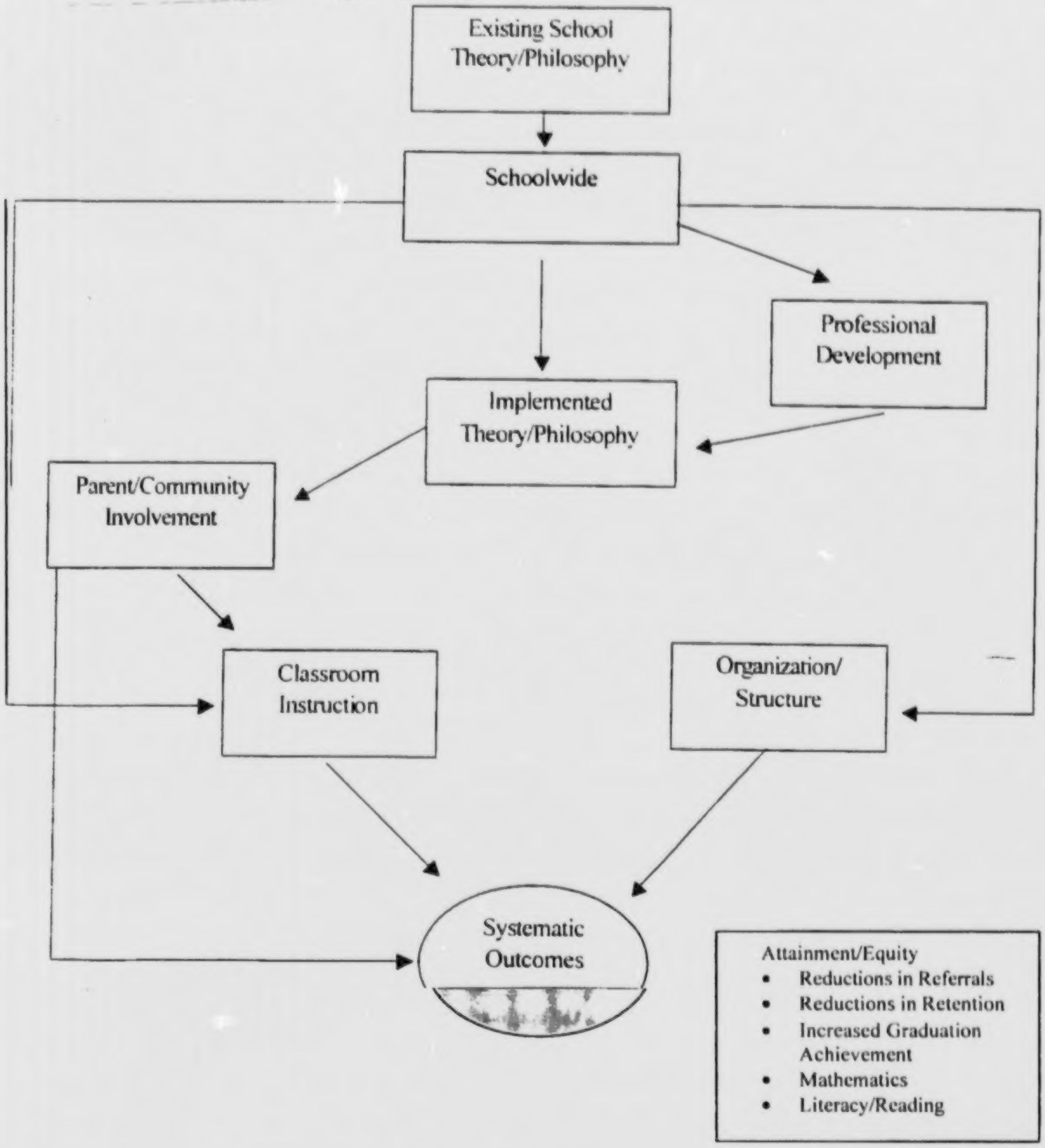
- **Schoolwide processes** that guide the reform process (e.g., *taking stock*)
- The **professional development** process that provides training in the schoolwide process (e.g., *networking*)
- The **implemented philosophy** (e.g., *reflective practice*)
- **Parent/community involvement** (e.g., *parent awareness*)

These features of school reforms (see Figure 1) usually involve the entire school community. Therefore it is important for members of the school community to compare these reform features. When implemented, the reform features help create an environment that supports school improvement. However, program reform features by themselves do not have a direct effect on student learning outcomes; they have an indirect effect because they influence changes in classroom practices. The reform features, along with the classroom practices that are prescribed in some reforms or are set in motion in systemic reforms, have logical linkages to **Systemic Outcomes,** which include:

- **Attainment/Equity Outcomes** (Reduction in referral to special education and retention by grade level. This should include reduction in dropout and increased graduation rates, especially for high school programs.)
- **Achievement** (Gains in, scores on, and pass rates for standardized tests in math and reading/verbal, including state tests and college entrance exams.)

These systemic outcomes are important to schools and policymakers. For more than two decades, reform-minded policymakers in states and at the federal level have been developing achievement tests, curriculum, and standards that are aligned in their content. However, before it is possible to judge whether a CSR model will help schools meet learning standards, it is necessary to consider how these reforms link to learning outcomes. Therefore, it is necessary to consider how the classroom practices introduced in the reform link to specific learning related outcomes in reading/language and math.

Figure 1
Framework for Comparing Reform Features in CSR Models


Existing School Theory/Philosophy
Schoolwide
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
Classroom Instruction
Organization/ Structure
Systematic Outcomes
Attainment/Equity
• Reductions in Referrals
• Reductions in Retention
• Increased Graduation
Achievement
• Mathematics
• Literacy/Reading

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Comparing Specific Program Features in Reading/Language Arts Programs

This Study Guide also uses the systemic framework for comparing *Reading/ Language Arts Program Features* (Figure 2). Most of the CSR models include programs of preferred instructional processes for reading and language arts. In addition to summarizing reform features related to reading improvement, the Study Guide identifies:

- **Classroom Instruction** program features (e.g., *Cooperative Learning*).
- **Organization/Structure** program features (e.g. *Basal Readers*).

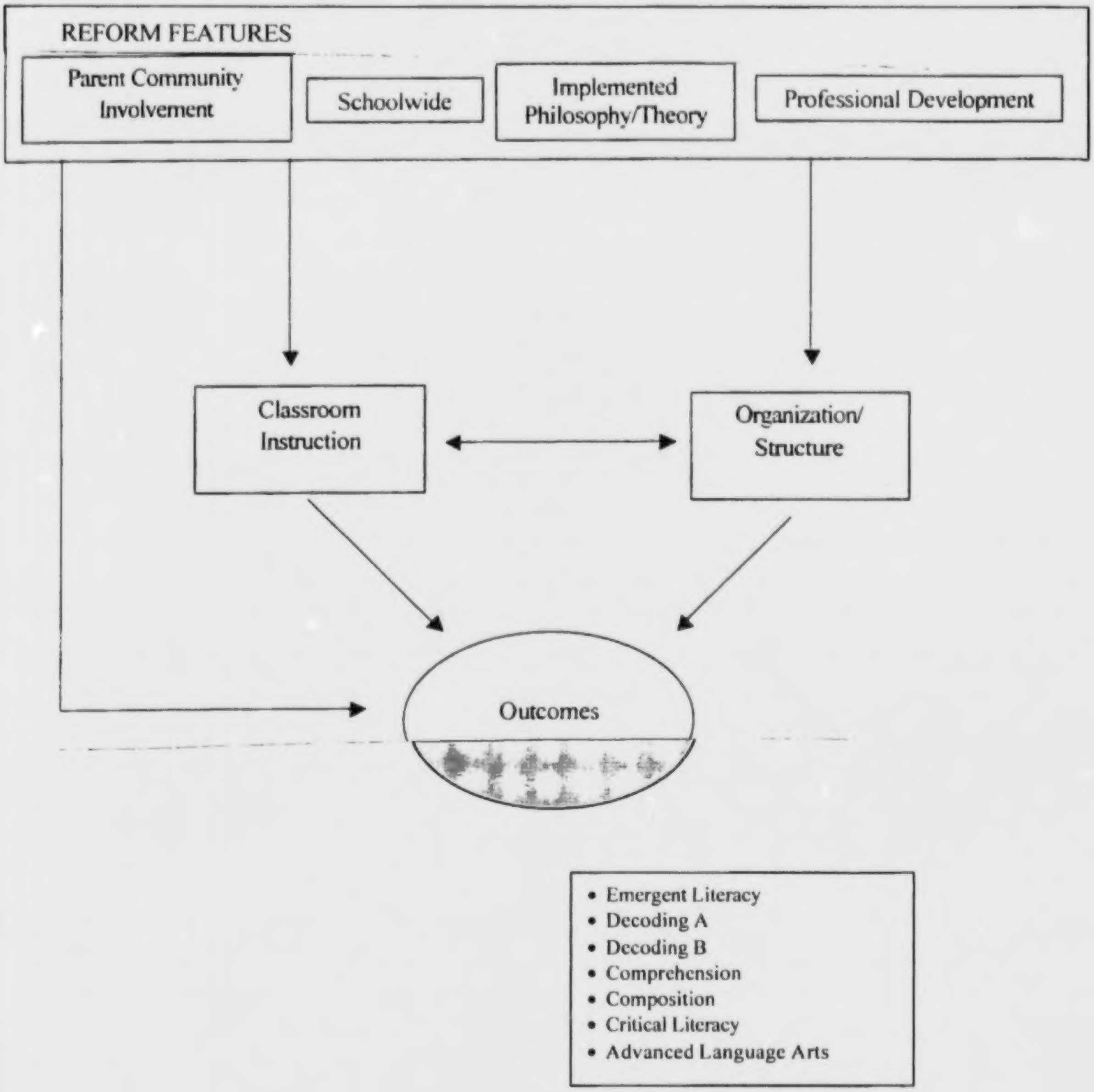
These features relate directly to reading outcomes. As part of the review, the Study Guide considers whether the reforms emphasize:

- Emergent literacy (including reading readiness)
- Context-free decoding (Decoding A)
- Meaning-oriented decoding (Decoding B)
- Comprehension
- Composition
- Critical literacy
- Advanced language arts (usually high school only)

By improving these reading-related learning outcomes, CSR reforms can influence student achievement (grades and scores on standardized tests) and attainment/equity (reduced special educational referral and retention), the intended systemic outcomes of these reforms. By focusing on these learning outcomes for literacy and language arts, the framework provides a means of relating the CSR models to Minnesota's learning standards.

Figure 2

Framework for Comparing Reading Programs in CSR Models


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Outcomes
• Emergent Literacy
• Decoding A
• Decoding B
• Comprehension
• Composition
• Critical Literacy
• Advanced Language Arts

Comparing Specific Features in Math Programs

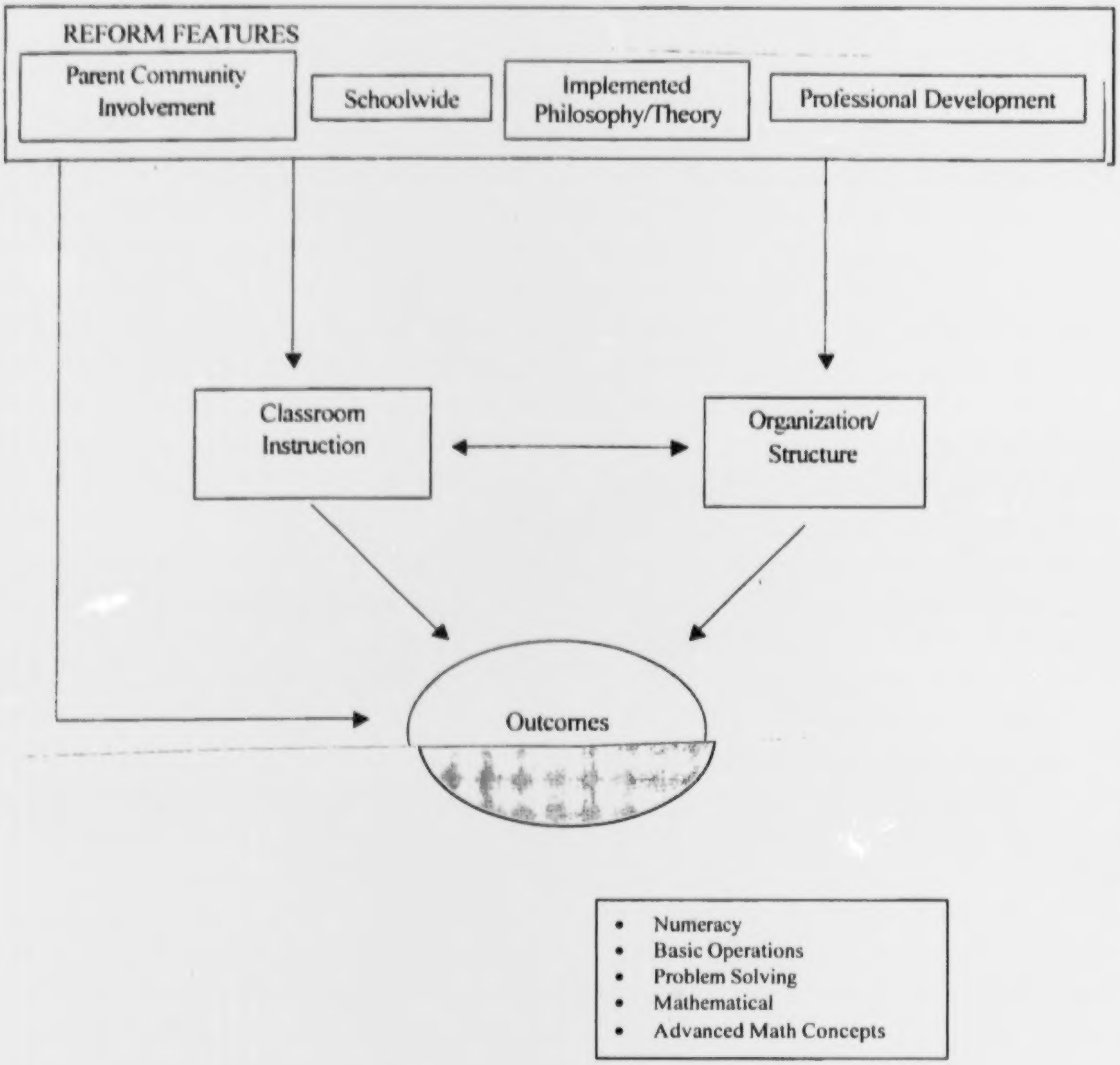
The Study Guide also uses the systemic framework to compare *Math Program Features* (Figure 3). Most of the CSR models include math programs. For these programs, the Study Guide identifies classroom practices (*classroom instruction* features, and *organization/structural* features) related to math and that link to improvement in math outcomes. These reviews consider whether the following outcomes are explicitly emphasized:

- Numeracy
- Basic operations
- Problem solving
- Mathematical concepts
- Advanced math (usually high school only)

These math-related learning outcomes are related to the math content on math standardized tests. Further, achievement on these indicators also influences attainment and equity. By focusing on these learning outcomes for math, it is possible for schools to explore the ways these reforms relate to Minnesota's learning standards.

Figure 3

Framework for Comparing Mathematics Programs in CSR Models


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Outcomes
Numeracy
Basic Operations
Problem Solving
Mathematical
Advanced Math Concepts

How to Use This Study Guide

How can schools assess which reforms might be appropriate? This Study Guide provides a resource that school teams (groups of teachers and parents who review reform models) can use to examine and compare possible CSR models and select a set of reforms. Schools that already have chosen a reform model can use the Study Guide to develop a plan for addressing their state's learning standards. Schools that still are studying reform models can use the Study Guide to compare models and make informed choices about model designs. Specifically this Study Guide can be used to:

- **Examine how CSR models address Minnesota learning standards**: Part I provides an analysis of the ways the ten CSR models address Minnesota's learning standards in reading, math, and inquiry. Some CSR models empower teachers to develop new practices that could meet the standards. Others include specific classroom practices that explicitly address some, but not all, of Minnesota's learning standards. (Appendix B summarizes Minnesota Reading Standards, Appendix C summarizes Minnesota Math Standards, and Appendix D summarizes Minnesota Inquiry Standards.)
- **Review and compare CSR models**: Part II provides a review of the reform features, reading/language features, and math features of ten CSR reforms, using a common set of feature definitions (Appendix A). Stakeholders should consider how well their current practices, as well as the types of practices that are desirable, relate to their reform profile.

The Study Guide provides information schools can use to make judgements about which reforms fit their schools. When debating which CSR models should be selected, it is important to consider whether the school community prefers to implement a prescribed model or a process-oriented model. CSR models with prescribed features define classroom practices (instructional features and organization/structure features) that must be implemented by teachers in classrooms if the reform is to achieve the intended outcomes. Teachers should assess for themselves whether these new practices in reading, math, and other areas will help them meet learning standards and address the concerns they have about their school.

The detailed reviews in Part II will help schools make these initial assessments. Indeed, the discussions of the model designs should help schools develop plans for addressing learning standards in Minnesota as part of their CSR proposals. Keep in mind that process-oriented reforms establish processes that enable teachers and parents to reorganize classroom practices to adhere to the state standards and other goals that are established. Further, some reforms, such as America's Choice, combine both a prescribed curriculum and process-oriented reform strategies. Thus, schools can choose the reform models that fit their needs. Site-based teams that study alternative CSR models should remember that all of these reforms require substantial professional development time and therefore it is important to encourage buy-in from all teachers.

Part I: Addressing Learning Standards

Given that Minnesota, like most states, has recently developed comprehensive learning standards, it is crucial that school communities considering alternative CSR models also consider how these models address learning standards. This section examines how well the ten CSR reform models address Minnesota's Learning Standards. Three questions are considered:

- Does this CSR model directly address Minnesota's math, reading, and inquiry standards?
- Does this CSR model address Minnesota's standards (and component sub-skills) fully or partially?
- Does the CSR model have a process that enables schools to address the standards not directly or fully met by the CSR's design?

The first two questions are addressed by considering the program features included in the CSR model designs, an approach that assumes full implementation directly addresses the learning standards. If these features are implemented, they should impact student learning standards, possibly within the first year. A model may address the standards through classroom practice (instructional and organizational/structural features). Program features related to classroom practices, along with some features related to parent involvement, can directly influence a school's capacity to meet standards. Therefore, school review teams should consider how the features of math and reading programs will help them to meet the state's learning standards.

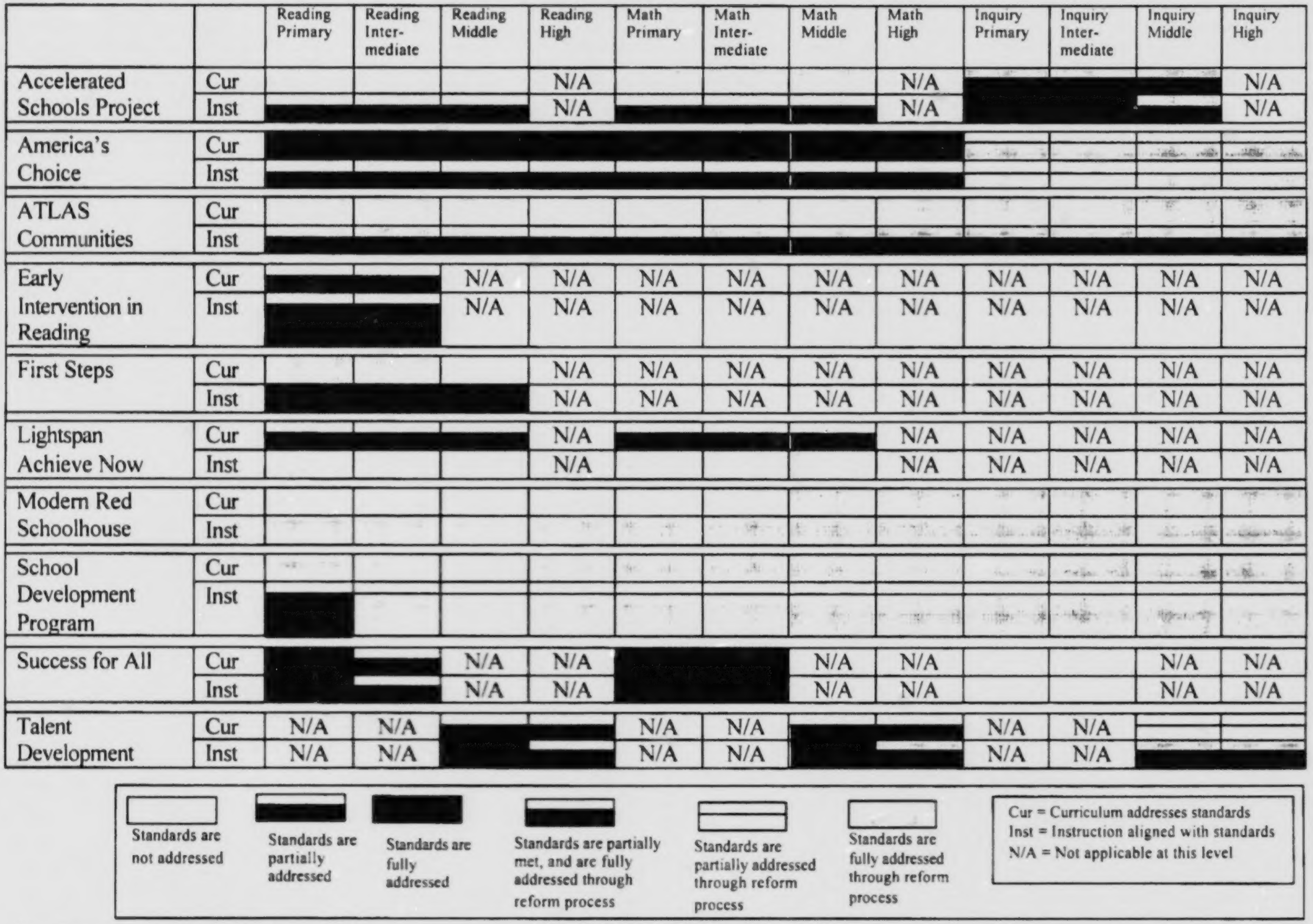
The third question is also important for schools to consider, because some CSR models have program features to help schools address standards that are not explicitly addressed by the classroom practices and parent involvement features of the model. For example, if a model does not directly address a standard area (e.g., inquiry), or does not fully meet the standard area (e.g., only some of the sub-skills are addressed), does it include process features (e.g., backmapping) that could help the school address the (sub)standards not covered? This question is obviously important when schools consider process-oriented reforms that tend not to impose specific curriculum or teaching methods, but instead prescribe a process through which the school determines and implements changes that involve curriculum and/or instruction. Thus, when considering how the process-oriented CSR models can help schools meet standards, the program reform features are reviewed to determine if and how those processes might help school communities address the standards.

The CSR - Standards Summary Charts (Table 1.1) graphically represent these questions and answers, and are more fully explained in the Model-by-Model Review. A few reforms (e.g. Success for All) include classroom practices that, if implemented, help schools address standards. Most reforms include reform process features that teachers could use to address standards. These distinctions merit consideration by schools. Schools should consider whether they want to implement CSR reforms that include features that will directly address state standards and/or whether they want to implement processes, such as inquiry and backmapping, that will enable them to address standards. Specifically, the ten CSR models meet the standards in different ways:

- **Accelerated Schools Project** is a process-oriented reform that has a constructivist philosophy and includes classroom practices that enable educators to develop processes that meet learning standards. However, it does not include features that meet all of the standards. See Table I. A.
- **America's Choice** is a systemic reform that combines prescribed and process features. The reform includes classroom practices that meet most of the learning standards in reading and math, if these features are fully implemented, as well as process features that could help schools address the standards in inquiry. See Table I.B.
- **ATLAS Communities** is a process-oriented reform through which schools develop a coherent educational program by developing clear standards linked to authentic assessment and instruction. The model includes constructivist instructional practices and engages in classroom and schoolwide research leading to school improvement, enabling schools to address learning standards. The program does not specify the features that meet all of the standards. See Table I.C.
- **Early Intervention in Reading** is a systemic intervention in reading that includes classroom practices that will enable schools to meet reading standards in early primary. It can be included as a component of a locally developed CSR model. See Table I.D.

- **First Steps** is a systemic early reading reform that addresses the learning standards in reading for early elementary and that includes features that help schools serve students who are challenged learning to read. It can be included as component of a locally developed CSR model. See Table I.E.
- **Lightspan Achieve Now** is a technology-based curriculum (reading and math) reform designed to be used by schools that use the reading and math standards as the basis for planning and delivering instruction. It can be included as a component of a locally developed CSR model. See Table I.F.
- **Modern Red Schoolhouse** is a process-oriented reform that is designed to enable schools to redesign their classroom practices and curriculum to meet state learning standards. See Table I.G.
- **School Development Program** is a process-oriented reform that focuses on school improvement and community development. The model includes reform features that could help schools organize to address state standards. See Table I.H.
- **Success for All** is a systemic reform model that includes classroom practices that enable elementary schools to implement classroom practices that help them meet state standards in reading and math. The model has few program reform features that might enable them to address standards in other areas. See Table I.I.
- **Talent Development Career Academies** is a systemic and process-oriented reform that includes features that help high schools address learning standards within learning communities created in the school. See Table I.J.

Table 1.1 How CSR Models Address Minnesota Learning Standards



		Reading Primary	Reading Inter-mediate	Reading Middle	Reading High	Math Primary	Math Inter-mediate	Math Middle	Math High	Inquiry Primary	Inquiry Inter-mediate	Inquiry Middle	Inquiry High
Accelerated Schools Project	Cur				N/A				N/A				N/A
	Inst				N/A				N/A				N/A
America's Choice	Cur												
	Inst												
ATLAS Communities	Cur												
	Inst												
Early Intervention in Reading	Cur			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Inst			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
First Steps	Cur				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Inst				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lightspan Achieve Now	Cur				N/A				N/A	N/A	N/A	N/A	N/A
	Inst				N/A				N/A	N/A	N/A	N/A	N/A
Modern Red Schoolhouse	Cur												
	Inst												
School Development Program	Cur												
	Inst												
Success for All	Cur			N/A	N/A			N/A	N/A			N/A	N/A
	Inst			N/A	N/A			N/A	N/A			N/A	N/A
Talent Development	Cur	N/A	N/A			N/A	N/A			N/A	N/A		
	Inst	N/A	N/A			N/A	N/A			N/A	N/A		

Standards are not addressed

Standards are partially addressed

Standards are fully addressed

Standards are partially met, and are fully addressed through reform process

Standards are partially addressed through reform process

Standards are fully addressed through reform process

Cur = Curriculum addresses standards
Inst = Instruction aligned with standards
N/A = Not applicable at this level

Review Method

Relating CSR model designs to learning standards is a complex process that involves relating specific program features to skills and sub-skills emphasized in the standards. Once schools have selected a few reforms that they want to more seriously consider, they should study how the reform addresses learning standards. It is essential that schools recognize that their choice of a CSR model sets practices in motion that influence how the school will address Minnesota's learning standards.

Minnesota Learning Standards: Overview

The Minnesota Learning Standards are performance-based standards that require students to perform specific tasks—administered as a Performance Packet—to demonstrate achievement in a series of related skills. Because achievement requires addressing a set of specific skills, it was necessary to distinguish between standards (categories of skills) and sub-standards (specific, individual skills). The state's Performance Packet is scored on a rubric with scores ranging from 1 to 4. A score of "1" suggests inadequate performance, and a score of "4" demonstrates work beyond proficiency. Students must score a "3" to meet the standard.

The Learning Standards are further divided into four levels: Primary, Intermediate, Middle-Level and High School. Preparatory standards cover kindergarten through Grade 3; Intermediate standards cover Grades 4 and 5; middle-level content standards cover Grades 6 through 8. The high school standards reflect the state's graduation requirements.

The standards are process-oriented and performance-based with embedded content. The sub-skills are written with a high degree of specificity. Thus, while the standards do not prescribe a specific curriculum, they imply types of teaching and curricular focus in order for students to meet the standards. For example, a Primary Reading sub-standard of Interpretation and Evaluation requires students to:

> "Summarize ideas and identify tone in persuasive, fictional, and documentary presentations."

The performance is the ability to summarize and identify tone; the embedded content is reading to understand persuasive, fictional, and documentary materials. Consider a high school math example:

> "Investigate a problem of significance by formulating a complex question, designing a statistical study, collecting data, representing data appropriately, using appropriate statistics to summarize data, determining whether additional data and analysis are necessary, drawing conclusions based on data, and communicating the results appropriately for the intended audience."

Along with the implied content, these standards require students to use several higher-order thinking skills.

The highly specific and ambitious nature of these standards suggests that schools are unlikely to address them incidentally, that is without intentional effort. A particular curriculum or method not designed around the Minnesota standards cannot be assumed to fully "cover" them. For example, a school may adopt a "research-based" reading program that improves students' comprehension and reading rates. However a sub-standard requires interpreting figurative language, a specific skill not directly related to improving reading fluency. Thus, the adopted program cannot be assumed to fully address this standard. To be sure students will meet the Minnesota standards, schools adopting new programs need to be knowledgeable about the standards, determine if the new program will address all sub-skills, and decide how to address any sub-skills not covered in the program. This concern is particularly important for schools preparing to undertake comprehensive school reform.

Minnesota Learning Standards: Read, Listen and View

The Minnesota reading standards focus primarily on reading but include interpreting graphic information. The standards are performance-based and require students to be able to explain their understanding, rather than simply respond to multiple-choice questions, suggesting tasks such as writing, discussing, and creating graphic visualizations of various written formats. The standards represent a balanced literacy approach in which students must demonstrate mastery of phonics for pronouncing new words, and reading for deeper meaning as is consistent with Whole Language approaches. Beginning at the earliest level, the skills represented in the standards are geared toward comprehension and critical literacy, which are built upon with increasing complexity across the levels and rely more upon higher-order thinking skills.

Each standard at each level is broken into various sub-skills, which have been considered as discrete sub-standards and grouped according to content into categories that cut across the grade levels (See Box 1.1). The categories and their respective grade levels are listed below, and the full listing of the standard sub-skills by reading outcome and grade level are listed in Appendix B.

Box 1.1 Reading Outcomes Related to Minnesota Reading Standards

Reading Outcome Category	Minnesota Standard	Grade Level
Phonics/Early Literacy/ Vocabulary Building	Literal Comprehension. Fiction.	*Primary, Intermediate.* *Middle-Level.*
Comprehension	Literal Comprehension. Fiction. Nonfiction.	*Primary, Intermediate.* *Middle-Level.* *Middle-Level.*
Applied Reading/ Technical Reading	Literal Comprehension. Technical Reading. Technical Reading, Listening and Viewing.	*Primary, Intermediate.* *Middle-Level.* *High School.*
Interpretation	Interpretation and Evaluation. Fiction.	*Primary, Intermediate.* *Middle-Level.*
Evaluation	Interpretation and Evaluation. Fiction. Nonfiction. Reading, Listening and Viewing Complex Information.	*Primary, Intermediate.* *Middle-Level.* *Middle-Level.* *High School.*

This review assumes full implementation of the CSR model, including the specified curriculum, specific instructional methods, and those reform processes included in the CSR model that strengthen the impact of classroom instructional practices and parent involvement. Some CSR models consider the process of reform to be evolving, or emergent, rather than fully present upon initial implementation. The full effect of process-oriented models (one or more years after initial implementation) should be analyzed by comparing both the how classroom practices and how the program reform features influence a school's ability to meet learning standards.

This review does not include a content analysis of specific curriculums. It simply was not possible, as part of this review, to check whether a specific lesson included within the prescribed curriculum matched to a standard or sub-skill. Instead, we examined how the specific instruction and organization features (along with the model's implemented theories of learning and stated instructional goals) matched the set of standard skills addressed in the reading outcomes. Faculty members in schools would need to review the curriculum in these reforms to judge how well it meets the standards.

Minnesota Learning Standards: Mathematical Applications

The Minnesota math standards are performance-based and organized around broad math concepts. The organization and content covered are similar to the math instruction promoted in the *Principles and Standards for School Mathematics* by the National Council of the Teachers of Mathematics (NCTM). The foundations for mathematical logic are laid in the early grades, where concepts such as geometric or algebraic reasoning are introduced. In addition, the standards require students to demonstrate conceptual understanding of computation used and the ability to use various strategies to solve problems, rather than demonstrate the ability to perform a discrete set of math skills. The type of teaching suggested by these standards places strong emphasis on building a conceptual base of math understanding. This approach builds math logic and fluency, with the intention of improving students' ability to apply increasingly complex math concepts in contexts both in and outside of math class. As such, specific math skills are embedded into the instruction as component parts of a conceptual whole rather than as a set of separate but related learning outcomes.

Though the Minnesota math standards do not replicate the NCTM standards, they are similar both in the type of math instruction implied and in the breadth of content areas covered. Because there is little documentation in the Minnesota standards, the literature related to math instruction and the NCTM standards was used in this analysis to build an understanding of how the classroom practices in CSR models align with specific standards. Using the more detailed information on NCTM standards, we were able to link CSR program features to the math standards. For example, several Implemented Theories/Philosophies are related to the standards: *Concept Development*, *Constructivist Learning,* and, to a lesser degree, *Thematic Teaching.*

The review of the Minnesota Mathematical Applications learning standards found the standard areas are reasonably correlated with the Math Outcomes used in Part II. The review of each reform identified the relationship between specific program features and math outcomes. Box 1.2 is a summary chart of the Minnesota Mathematical Application Learning Standards correlated to the Categories of Math Outcomes. A more complete description of the standards, with their subcomponent standards listed by grade level, is included in this report in Appendix C. The reconfiguration of the math standards allows for looking across grade levels for program features related to specific math outcomes.

Box 1.2 Math Outcomes Related to Minnesota Math Standards

Minnesota Learning Standards	**Categories of Math Outcomes**
Number Sense *Primary, Intermediate, Middle-Level*	Numeracy, Basic Operations, and Problem-Solving
Shape, Space and Measurement *Primary, Intermediate, Middle-Level, High School*	Math Concepts: Geometric Reasoning, Algebraic Reasoning, and Measurement
Chance and Data Handling *Intermediate, Middle-Level, High School*	Math Concepts: Data Analysis, and Probability and Statistics
Patterns and Functions/Algebraic Patterns[3] *Middle-Level, High School*	Advanced Math: Algebra
Discrete Math *High School*	Advanced Math: Discrete
Technical Applications *High School*	Advanced Math: Technical

Minnesota Learning Standards: Inquiry

The Inquiry standards are performance-based, process-oriented standards that are not specific to a subject area. At the earliest level, the standards reflect the scientific research method. The primary standards include gathering through primary sources, recording, displaying, and explaining information in response to a question. The intermediate standards become more sophisticated, including such details as refinement of questions, comparing results for individuals to groups, adding variables to experiments, and developing and conducting surveys with analysis of survey results. The standards grow more specific at the middle level and include three separate standards areas: Direct Observation, Accessing Information, and Controlled Experiments. Some of these standards are very detailed, and focus on applying higher-order thinking skills to research problems. The following is an example of a sub-skill from Direct Observation:

> "A student shall demonstrate the ability to gather information to answer a scientific or social science question though direct observations, including framing a question, collecting and recording data, displaying data in appropriate format, looking for patterns in observable data, relating findings to new situations or large groups findings, answering a question or presenting a position using data, and identifying areas for further investigation."

---

[3] Patterns and Functions is the Middle-Level standard; Algebraic Patterns is the High-School standard.

The high school Inquiry standards center on broad-based performance tasks, which are listed as twelve separate standards, divided into two groups of six (Subject Area Research and the Research Process). Students must complete one standard from each of the two areas.

Box 1.3 lists the Minnesota Inquiry standards by grade level. A more detailed list, including the sub-standard skills, can be found in Appendix D.

Box 1.3 Minnesota Inquiry Standards

Inquiry Standard	*Standard Level*
Data Categorization, Classification, and Recording	Primary
Media, Observation, and Investigation	Intermediate
Direct Observation	Middle-Level
Accessing Information	Middle-Level
Controlled Experiments	Middle-Level
Subject Area Research	High School
The Research Process	High School

Because these standards are not associated with a single subject or content area, it is implied that teachers and schools are expected to incorporate instruction around these standards into other subject areas, or at the elementary grade level, to incorporate instruction directly on inquiry into the class schedule. It is more likely that teachers and schools will approach the inquiry standards through other subject areas in which inquiry learning is appropriate, such as science, math, or social studies.

None of the CSR models or content area reforms have curriculum addressing inquiry specifically, or recommend instruction geared at addressing inquiry outcomes. In short, no model, just by implementing it as a package, is suggested to relate to successful student outcomes on these standards. However, some program features have been identified as being related to the type of teaching associated with the skills represented in these standards. To meet the Inquiry Standards, faculties need to use these process features to intentionally focus on addressing the specifics of the inquiry standards. Thus, this analysis identifies the features that could be used to address the inquiry standards, along with the process features in CSR models that would assist the school in making the adjustments to the instructional programs to meet the Minnesota Inquiry Standards.

Program features that promote instruction aligned with the Inquiry Standards include some Implemented Theories/Philosophies of learning, Classroom Instruction, and

Organizational/Structural components. Implemented theories include *Self-Extending Systems, Constructivist Learning,* and to a lesser degree, *Thematic Teaching*. Classroom Instruction features include *Authentic Instruction, Inquiry Learning,* and *Project-Based Learning*. In addition, the Structural/Organizational feature of *Thematic Units* could also be used. For example, several standards included in the Minnesota Math standards category of Chance and Data Handling would be applicable to the inquiry standard and could be extended into other areas of inquiry through thematic units. Examples of reform processes that could be used to promote the inquiry standards include the use of *Inquiry* at the schoolwide level of schoolwide *Backmapping* to develop curriculum directly relating to standards.

Comparing CSR Models to State Performance Standards

This review assumes full implementation of the CSR model, including any specific curriculum, instructional methods, and reform processes included in the model that strengthen the impact of classroom instructional practices and parental involvement related to student learning outcomes. The models reviewed here include at least one of the following components, most often several in varying combinations, as part of the reform design: curriculum, instructional methods, reform processes related to curriculum, reform processes related to instructional methods, and/or reform processes related to aligning curriculum and/or instruction to state or local learning standards. The tables in Part I highlight both the component parts of each model and the degree to which—based on our analysis (Tables A.1 through J.4)—it addresses the Minnesota Standards.

A reform model may address standards through curriculum or instructional practices. Models included in this review all provide one or more of the following: a prescribed curriculum, a prescribed instructional approach, or a process through which curriculum and/or instruction is studied and changed to improve student outcomes. This review considers features present upon implementation (i.e. training in Authentic Instruction) and how these features relate (curriculum or instruction) to particular learning standards. Because process-oriented reforms require the school to work through a process to determine features to adopt (i.e. developing standards-based assessments), this review also considers those specific processes to determine if the standards are likely to be addressed. These processes are described in detail in Part II, A-J.

It is important to note that the process-oriented reforms often do not specify or require curricular materials or instructional practices, although most strongly encourage methods that are consistent with the models' theories of teaching and learning. Thus, in these models, fewer classroom-level features will be identified than are discussed in the reviews in Part II. This does not suggest that little happens in classrooms, just that it is not pre-determined—and that specific inferences based on classrooms are harder to make. Therefore, for process-oriented reforms it is especially important to understand the particular reform processes that are used to enable schools to fully meet standards.

For each reform model, an analysis on each standard area considering each group of standard sub-skills has been conducted. In this analysis, features that are always present in the model are represented in **bold** print, and features that are often present in schools implementing the reform model, but are not required by the model, are in *italicized* print (See Box 1.4). A distinction is made between those features that have direct effects on student outcomes (white text box) and those that have indirect effects (gray text box). The indirect program components have an indirect effect by influencing those components with direct effects (See Box 1.4 and Box 1.5). A final distinction is made for "dependent" program features. These features, indicated by [brackets], can be direct or indirect features, but only have an effect when the specific standards are being addressed by the feature. For example, the feature "teacher/inquiry portfolio" (used to encourage teacher reflective practice and improve classroom teaching) will only have an indirect effect on those standards related to the area of work collected and studied by the teacher.

Box 1.4 KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

When comparing reform models for their ability to address learning standards, readers should consider whether the standards are not fully addressed by the model—either through included (prescribed) curriculum or instruction, or through the reform process. If not, does the model have a formal method/process for aligning the existing program to local or state learning standards? Many models, due to the intense focus on learning standards, have adapted reform-process features or developed new features to help schools meet standards. Given the complex nature of Minnesota's standards, schools must plan to adapt features of the reform models or add supplemental features to fully address the standards. This means the schools should select a reform after considering state standards and developing plans to meet these standards as part of their implementation process.

Box 1.5 How Program Feature Types Help Schools Meet Reading Standards: Direct and Indirect Influences

	Phonics/ Literacy/ Vocabulary	*Comprehension*	*Applied Learning/ Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	Indirect	Indirect	Indirect	Indirect	Indirect
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Indirect	Indirect	Indirect	Indirect	Indirect
PROFESSIONAL DEVELOPMENT	Indirect	Indirect	Indirect	Indirect	Indirect
PARENT/COMMUNITY INVOLVEMENT	Indirect or Direct	Indirect or Direct	Indirect or Direct	Indirect or Direct	Indirect or Direct
CLASSROOM INSTRUCTION	Direct	Direct	Direct	Direct	Direct
ORGANIZATION/ STRUCTURAL	Direct	Direct	Direct	Direct	Direct

A. Accelerated Schools Project

Accelerated Schools Project is a process-oriented reform that has a constructivist philosophy and includes classroom practices that enable educators to develop processes that meet learning standards. However, it does not include features that meet all of the standards. This section illustrates:

- **ASP** reform process features that enable schools to address all types of state learning standards (Table A.1).
- **ASP** program features that address Minnesota's learning standards in reading (Table A.2).
- **ASP** program features that address Minnesota's learning standards in math (Table A.3).
- **ASP** program features that address Minnesota's learning standards in inquiry (Table A.4).

Table A.1. Accelerated Schools Project
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Inquiry** **Study Groups/School** **Taking Stock** **Visioning** **Instructional Guidance**
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	**Networking/Powerful Learning Laboratory** **In-Service Workshop**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table A.2. Accelerated Schools Project
Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/ Vocabulary*	*Comprehension*	*Applied Learning/ Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	**Instructional Guidance [Inquiry]**	**Instructional Guidance [Inquiry]**	**Instructional Guidance [Inquiry]**	**Instructional Guidance [Inquiry]**	**Instructional Guidance [Inquiry]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Acceleration** **Whole Language**	**Acceleration** **Constructivist Learning** **Student Empowerment** **Thematic Teaching** **Whole Language**	**Concept Development** **Constructivist Learning** **Thematic Teaching**	**Concept Development** **Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Concept Development** **Constructivist Learning** **Student Empowerment** **Thematic Teaching**
PROFESSIONAL DEVELOPMENT	**Networking/PLL**	**Networking/PLL**	**Networking/PLL**	**Networking/PLL**	**Networking/PLL**
PARENT/COMMUNITY INVOLVEMENT	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**
ORGANIZATIONAL/ STRUCTURAL	**Interactive Learning** **Small groups** *Peer Tutoring*	**Heterogeneous groups** **Interactive Learning** **Small groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring* *Trade Books*	**Heterogeneous groups** **Small groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring*	**Heterogeneous groups** **Interactive Learning** **Small groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring* *Trade Books*	**Heterogeneous groups** **Interactive Learning** **Small groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring* *Trade Books*
CLASSROOM INSTRUCTION	**Performance Assessment** *Collaborative Teams* *Paired Reading*	**Authentic Instruction** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Creative Writing* *Interpreting/Discussion* *Paired Reading*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Creative Writing* *Interpreting/Discussion* *Paired Reading*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Creative Writing* *Interpreting/Discussion*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Interpreting/Discussion*

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Table A.3. Accelerated Schools Project
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**Instructional Guidance** **[Inquiry]**	**Instructional Guidance** **[Inquiry]**	**Instructional Guidance** **[Inquiry]**	**Instructional Guidance** **[Inquiry]**	N/A	N/A
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Acceleration** **Concept Development** **Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Concept Development** **Constructivist Learning** **Thematic Teaching**	**Concept Development** **Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Concept Development**	N/A	N/A
PROFESSIONAL DEVELOPMENT	**Networking/PLL**	**Networking/PLL**	**Networking/PLL**	**Networking/PLL**	N/A	N/A
PARENT/ COMMUNITY INVOLVEMENT	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	**[Parent Participation in Curriculum Planning]**	N/A	N/A
ORGANIZATIONAL/ STRUCTURAL	**Heterogeneous Groups** **Interactive Learning** **Small Groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring*	**Heterogeneous Groups** **Interactive Learning** **Small Groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring*	**Heterogeneous Groups** **Interactive Learning** **Small Groups** **Thematic Units** *Student-Initiated Learning Centers* *Peer Tutoring*	**Heterogeneous Groups** **Small groups** **Thematic Units** *Peer Tutoring*	N/A	N/A
CLASSROOM INSTRUCTION	**Authentic Instruction** **Performance Assessment** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Interpreting/Discussion* *Manipulatives* *Worksheets/Workbooks*	**Authentic Instruction** **Performance Assessment** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Manipulatives* *Interpreting/Discussion* *Worksheets/Workbooks*	**Authentic Instruction** **Performance Assessment** **Inquiry Learning** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Interpreting/Discussion* *Manipulatives* *Worksheets/Workbooks*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Interpreting/Discussion* *Worksheets/Workbooks*	N/A	N/A

Table A.4. Accelerated Schools Project
Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE	**Inquiry Instructional Guidance**	**Inquiry Instructional Guidance**	**Inquiry Instructional Guidance**	**Inquiry Instructional Guidance**	**Inquiry Instructional Guidance**	N/A	N/A
IMPLEMENTED THEORY/ PHILOSOPHY	**Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Constructivist Learning** **Student Empowerment** **Thematic Teaching**	**Constructivist Learning**	N/A	N/A
PROFESSIONAL DEVELOPMENT	**Networking/PLL [Teacher Collaboration]**	**Networking/PLL [Teacher Collaboration]**	**Networking/PLL [Teacher Collaboration]**	**Networking/PLL [Teacher Collaboration]**	**Networking/PLL [Teacher Collaboration]**	N/A	N/A
PARENT/ COMMUNITY INVOLVEMENT	**Parent Participation in SBM** **[Parent Participation in Curriculum Planning]**	**Parent Participation in SBM** **[Parent Participation in Curriculum Planning]**	**Parent Participation in SBM** **[Parent Participation in Curriculum Planning]**	**Parent Participation in SBM** **[Parent Participation in Curriculum Planning]**	**Parent Participation in SBM** **[Parent Participation in Curriculum Planning]**	N/A	N/A
ORGANIZATION/ STRUCTURE	**Small Groups** **Thematic Units** *Student-Initiated Learning Centers*	**Interactive Learning** **Small Groups** **Thematic Units** *Student-Initiated Learning Centers*	**Interactive Learning** **Small Groups** **Thematic Units**	**Small Groups** **Thematic Units**	**Interactive Learning**	N/A	N/A
CLASSROOM INSTRUCTION	**Authentic Instruction** **Inquiry Learning** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Inquiry Learning* *Manipulatives*	**Authentic Instruction** **Inquiry Learning** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool* *Inquiry Learning*	**Authentic Instruction** **Inquiry Learning** **Problem-Solving** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool*	**Authentic Instruction** **Inquiry Learning** **Project-Based Instruction** *Collaborative Teams* *Computer as a Tool*	**Authentic Instruction** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool*	N/A	N/A

B. America's Choice

America's Choice is a systemic reform that combines prescribed and process features. The reform includes classroom practices that meet most of the learning standards in reading and math, if these features are fully implemented, as well as process features that will help schools meet the standards in inquiry. The analysis of how America's Choice address standards considers:

- **America's Choice** reform process features that enable schools to address other types of state learning standards (Table B.1).
- **America's Choice** program features that address Minnesota's learning standards in reading (Table B.2).
- **America's Choice** program features that address Minnesota's learning standards in math (Table B.3).
- **America' Choice** program features that address Minnesota's learning standards in inquiry (Table B.4).

Table B.1. America's Choice
Reform Process Program Features—Addressing State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Taking Stock** **Study Group/Teacher**
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table B.2. America's Choice
Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance [Specialized Courses of Study] [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Acceleration Prescribed Curriculum Phonological Awareness Standards-Based Instruction Whole Language	Acceleration Prescribed Curriculum Standards-Based Instruction Thematic Teaching Whole Language	Concept Development [Prescribed Curriculum] Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching
PROFESSIONAL DEVELOPMENT	[In-Service Workshop] On-site Facilitator (literacy coach) [Teacher Inquiry/ Portfolio]	[In-Service Workshop] On-site Facilitator (literacy coach) [Teacher Inquiry/Portfolio]	[Teacher Inquiry/Portfolio]	[In-Service Workshop] On-site Facilitator (literacy coach) [Teacher Inquiry/Portfolio]	[In-Service Workshop] On-site Facilitator (literacy coach) [Teacher Inquiry/Portfolio]
PARENT/COMMUNITY INVOLVEMENT	Parent Communication Paired Reading *Learning Contracts/Parent*	Parent Communication Paired Reading *Learning Contracts/Parent*	'arent Communication	'arent Communication *Learning Contracts/Parent*	'arent Communication *Learning Contracts/Parent*
ORGANIZATIONAL/ STRUCTURAL	Cross-Year Portfolios Diagnostic Procedures Frequent Assessment Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Supplemental Learning *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures Double Block/English Frequent Assessment Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Supplemental Learning Thematic Units Trade Books Peer Tutoring	Cross-Year Portfolios Double Block/English Frequent Assessment One-on-One Tutoring Small Groups Supplemental Learning Thematic Units *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures Double Periods/English Frequent Assessment Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Supplemental Learning Thematic Units Trade Books *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures Double Periods/English Frequent Assessment Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Supplemental Learning Thematic Units Trade Books *Peer Tutoring*
CLASSROOM INSTRUCTION	Collaborative Teams Learning Contract/Student Performance Assessment *Worksheets/Workbooks*	Advanced Writing Mechanics Authentic Instruction Collaborative Teams Essays Journals Learning Contract/Student Meaning Context/Predicting Performance Assessment Project-Based Instruction Self-Selected Reading Writing Mechanics *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Essays Journals Learning Contract/Student Meaning Context/ Predicting Performance Assessment Project-Based Instruction *Worksheets/Workbooks*	Advanced Writing Mechanics Authentic Instruction Collaborative Teams Computer as a Tool Essays Learning Contract/Student Meaning Context/ Predicting Performance Assessment Project-Based Instruction Self-Selected Reading *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Essays Learning Contract/Student Meaning Context/ Predicting Performance Assessment Project-Based Instruction Self-Selected Reading *Worksheets/Workbooks*

Table B.3. America's Choice
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Instructional Guidance Systematic Learning [Study Group/Teacher]	Community Partnerships Instructional Guidance Systematic Learning [Study Group/Teacher] [Specialized Study(HS)]
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Acceleration Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction Thematic Teaching	Concept Development Prescribed Curriculum Standards-Based Instruction	Concept Development [Prescribed Curriculum] Standards-Based Instruction Thematic Teaching
PROFESSIONAL DEVELOPMENT	[In-Service Workshop] [Teacher Inquiry/ Portfolios]	[In-Service Workshop] [Teacher Inquiry/ Portfolios]	[In-Service Workshop] [Teacher Inquiry/ Portfolios]	[In-Service Workshop] [Teacher Inquiry/ Portfolios]	[In-Service Workshop] [Teacher Inquiry/ Portfolios]	[In-Service Workshop] [Teacher Inquiry/ Portfolios]
PARENT/COMMUNITY INVOLVEMENT						
ORGANIZATIONAL/ STRUCTURAL	Cross-Year Portfolios Diagnostic Procedures One-on-One Tutoring Ongoing Written Observations Supplemental Learning Small Groups Thematic Units *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures One-on-One Tutoring Ongoing Written Observations Supplemental Learning Small Groups Thematic Units *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures One-on-One Tutoring Ongoing Written Observations Supplemental Learning Small Groups Thematic Units *Peer Tutoring*	Cross-Year Portfolios Double Periods/Math Diagnostic Procedures One-on-One Tutoring Supplemental Learning Small Groups Thematic Units *Peer Tutoring*	Cross-Year Portfolios Double Periods/Math Diagnostic Procedures One-on-One Tutoring Small Groups Supplemental Learning *Peer Tutoring*	Cross-Year Portfolios Diagnostic Procedures Double Periods /Math One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning Thematic Units *Peer Tutoring*
CLASSROOM INSTRUCTION	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Problem-Solving Project-Based Instruction *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Problem-Solving Project-Based Instruction *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Problem-Solving Project-Based Instruction *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Problem-Solving Project-Based Instruction *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Problem-Solving Project-Based Instruction *Worksheets/Workbooks*	Authentic Instruction Collaborative Teams Computer as a Tool Performance Assessment Project-Based Instruction *Worksheets/Workbooks*

Table B.4. America's Choice
Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**[Standards-Based Instruction] Thematic Teaching**	**[Standards-Based Instruction] Thematic Teaching**	**[Standards-Based Instruction] Thematic Teaching**	**[Standards-Based Instruction] Thematic Teaching**	**[Standards-Based Instruction]**	**[Standards-Based Instruction] Thematic Teaching**	**[Standards-Based Instruction] Thematic Teaching**
PROFESSIONAL DEVELOPMENT	**[Certified Specialist]**	**[Certified Specialist]**	**[Certified Specialist]**	**[Certified Specialist]**	**[Certified Specialist]**	**[Certified Specialist]**	**[Certified Specialist]**
PARENT/ COMMUNITY INVOLVEMENT							
ORGANIZATIONAL/ STRUCTURAL	**Cross-Year Portfolios Small Groups Thematic Units**	**Cross-Year Portfolios Small Groups Thematic Units**	**Cross-Year Portfolios Small Groups Thematic Units**	**Cross-Year Portfolios Small Groups Thematic Units**	**Cross-Year Portfolios**	**Cross-Year Portfolios Thematic Units**	**Cross-Year Portfolios Thematic Units**
CLASSROOM INSTRUCTION	**Authentic Instruction Collaborative Teams Computer as a Tool Problem-Solving Project-Based Instruction**	**Authentic Instruction Collaborative Teams Computer as a Tool Problem-Solving Project-Based Instruction**	**Authentic Instruction Collaborative Teams Computer as a Tool Problem-Solving Project-Based Instruction**	**Authentic Instruction Collaborative Teams Computer as a Tool Project-Based Instruction**	**Authentic Instruction Computer as a Tool Project-Based Instruction**	**Authentic Instruction Computer as a Tool Project-Based Instruction**	**Authentic Instruction Computer as a Tool Project-Based Instruction**

C. ATLAS Communities

ATLAS Communities is a process-oriented reform through which schools develop a coherent educational program through developing clear standards linked to authentic assessment and instruction and enables educators to conduct classroom and schoolwide research leading to school improvement. The program does not specify the features that meet all of the standards. This section illustrates:

- **ATLAS** reform process features that enable schools to address all types of state learning standards (Table C.1).
- **ATLAS** program features that address Minnesota's learning standards in reading (Table C.2).
- **ATLAS** program features that address Minnesota's learning standards in math (Table C.3).
- **ATLAS** program features that address Minnesota's learning standards in inquiry (Table C.4).

Table C.1. ATLAS Communities
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Instructional Guidance** **Study Group/Teacher** **Taking Stock**
IMPLEMENTED THEORY/PHILOSOPHY	**Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**In-Service Workshops** **Teacher Collaboration**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table C.2. ATLAS Communities

Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/ Vocabulary*	*Comprehension*	*Applied Learning/ Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	**Instructional Guidance [Study Group/Teacher]**	**Instructional Guidance [Study Group/Teacher]**	**Instructional Guidance [Study Group/Teacher]**	**Instructional Guidance [Study Group/Teacher]**	**Instructional Guidance [Study Group/Teacher]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Child-Centered/ Developmental** **Standards-Based Instruction**	**Child-Centered/ Developmental** **Constructivist Learning** **Standards-Based Instruction**	**Child-Centered/ Developmental** **Concept Development** **Constructivist Learning** **Standards-Based Instruction**	**Child-Centered/ Developmental** **Concept Development** **Constructivist Learning** **Standards-Based Instruction**	**Child-Centered/ Developmental** **Concept Development** **Constructivist Learning** **Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshop]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***
PARENT/COMMUNITY INVOLVEMENT					
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** *Cross-Year Portfolios* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Thematic Units** *Cross-Year Portfolios* *Double Periods/English* *Heterogeneous Groups* *Individualized Instruction* *Peer Tutoring* *Small Groups* *Supplemental Learning*	**Diagnostic Procedures** **Frequent Assessment** **Thematic Units** *Cross-Year Portfolios* *Double Period/English* *Heterogeneous Groups* *Individualized Instruction* *Peer Tutoring* *Small Groups* *Supplemental Learning*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Thematic Units** *Cross-Year Portfolios* *Double Period/English* *Heterogeneous Groups* *Individualized Instruction* *Peer Tutoring* *Small Groups* *Supplemental Learning*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Thematic Units** *Cross-Year Portfolios* *Double Period/English* *Heterogeneous Groups* *Individualized Instruction* *Peer Tutoring* *Small Groups* *Supplemental Learning*
CLASSROOM INSTRUCTION	**Performance Assessment** *Collaborative Teams* *Scaffolding*	**Authentic Instruction** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Interpreting/Discussion* *Scaffolding*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Interpreting/Discussion* *Scaffolding*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Interpreting/Discussion* *Scaffolding*	**Authentic Instruction** **Inquiry Learning** **Performance Assessment** **Project-Based Instruction** *Collaborative Teams* *Interpreting/Discussion* *Scaffolding*

Table C.3. ATLAS Communities

Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**nstructional Guidance Study Group/Teacher]**	**nstructional Guidance Study Group/Teacher]**	**nstructional Guidance Study Group/Teacher]**	**nstructional Guidance Study Group/Teacher]**	**nstructional Guidance Study Group/ Teacher]**	**nstructional Guidance Study Group/Teacher]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**hild-Centered/ Developmental oncept Development onstructivist tandards-Based Instruction**	**hild-Centered/ Developmental oncept Development onstructivist tandards-Based Instruction**	**hild-Centered/ Developmental oncept Development onstructivist tandards-Based Instruction**	**oncept Development tandards-Based Instruction**	**oncept Development tandards-Based Instruction**	**oncept Development tandards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***	**[In-Service Workshop] [Teacher Inquiry/ Portfolios] *[Peer Review/ Observation]***
PARENT/ COMMUNITY INVOLVEMENT						
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures Flexible Grouping Thematic Units** *Cross-Year Portfolios Individualized Instruction Interactive Learning One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*	**Diagnostic Procedures Flexible Grouping Thematic Units** *Cross-Year Portfolios Individualized Instruction Interactive Learning One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*	**Diagnostic Procedures Flexible Grouping Thematic Units** *Cross-Year Portfolios Double Period Math Individualized Instruction Interactive Learning One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*	**Diagnostic Procedures Flexible Grouping Thematic Units** *Cross-Year Portfolios Double Period Math Individualized Instruction One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*	**Diagnostic Procedures Flexible Grouping** *Cross-Year Portfolios Double Period Math Individualized Instruction One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*	**Diagnostic Procedures Flexible Grouping Thematic Units** *Cross-Year Portfolios Double Period Math Individualized Instruction Interactive Learning One-on-One Tutoring Peer Tutoring Small Groups Supplemental Learning*
CLASSROOM INSTRUCTION	**Authentic Instruction Collaborative Teams Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion Problem-Solving*	**Authentic Instruction Collaborative Teams Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion Problem-Solving*	**Authentic Instruction Collaborative Teams Inquiry Learning Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion Problem-Solving*	**Authentic Instruction Collaborative Teams Inquiry Learning Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion Problem-Solving*	**Authentic Instruction Collaborative Teams Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion Problem-Solving*	**Authentic Instruction Collaborative Teams Inquiry Learning Performance Assessment Project-Based Instruction** *Computer as a Tool Interpreting/Discussion*

Table C.4. ATLAS Communities
Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**	**Instructional Guidance** **[Study Group/Teacher]**
IMPLEMENTED THEORY/ PHILOSOPHY	**Constructivist Learning** **Standards-Based Instruction**	**Constructivist Learning** **Standards-Based Instruction**	**Constructivist Learning** **Standards-Based Instruction**	**Constructivist Learning** **Standards-Based Instruction**	**Constructivist Learning** **Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***	**[In-Service Workshop]** **[Teacher Collaboration]** **[Teacher Inquiry/ Portfolios]** ***[Peer Review/ Observation]***
PARENT/ COMMUNITY INVOLVEMENT							
ORGANIZATION/ STRUCTURE	**Flexible Grouping** **Thematic Units** *Cross-Year Portfolios* *Small Groups*	**Flexible Grouping** **Thematic Units** *Cross-Year Portfolios* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Thematic Units** *Cross-Year Portfolios* *Individualized Instruction* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Thematic Units** *Cross-Year Portfolios* *Interactive Learning* *Small Groups*	**Flexible Grouping** *Cross-Year Portfolios* *Individualized Instruction* *Interactive Learning*	**Thematic Units** *Cross-Year Portfolios* *Individualized Instruction*	**Thematic Units** *Cross-Year Portfolios* *Individualized Instruction*
CLASSROOM INSTRUCTION	**Authentic Instruction** **Collaborative Teams** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool* *Problem-Solving*	**Authentic Instruction** **Collaborative Teams** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool* *Problem-Solving*	**Authentic Instruction** **Collaborative Teams** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool* *Problem-Solving*	**Authentic Instruction** **Collaborative Teams** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool*	**Authentic Instruction** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool*	**Authentic Instruction** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool*	**Authentic Instruction** **Inquiry Learning** **Project-Based Instruction** *Computer as a Tool*

4D. Early Intervention in Reading

Early Intervention in Reading (EIR) is a systemic intervention in reading that includes classroom practices that will enable schools to meet reading standards in early primary. It can be included as a component of a locally developed CSR model. See III.D.

- **EIR** reform process features that enable schools to address all types of state learning standards (Table C.1).
- **EIR** program features that address Minnesota's learning standards in reading (Table C.2).
- **EIR** program features that address Minnesota's learning standards in math (Not applicable).
- **EIR** program features that address Minnesota's learning standards in inquiry (Not Applicable).

Table D.1. Early Intervention in Reading
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

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Table D.2. Early Intervention in Reading

Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	**Systematic Learning**	**Systematic Learning**	**[Systematic Learning]**	**[Systematic Learning]**	**[Systematic Learning]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Phonological Awareness** **Prescribed Teacher Practices** **Self-Extending System**	**Prescribed Teacher Practices** **Self-Extending System**	**Self-Extending System**	**[Prescribed Teacher Practices]** **Self-Extending System**	**[Prescribed Teacher Practices]** **Self-Extending System**
PROFESSIONAL DEVELOPMENT	**Certified Specialist** **On-Site Facilitators** **[Networking]** *[Teacher Inquiry Portfolios]*	**Certified Specialist** **On-Site Facilitators** **[Networking]** *[Teacher Inquiry Portfolios]*	**On-Site Facilitators** **[Networking]** *[Teacher Inquiry Portfolios]*	**On-Site Facilitators** **[Networking]** *[Teacher Inquiry Portfolios]*	**On-Site Facilitators** **[Networking]** *[Teacher Inquiry Portfolios]*
PARENT/COMMUNITY INVOLVEMENT	*Parent Volunteers* **Book Distribution** **Learning Contracts/Parent Paired Reading**	*Parent Volunteers* **Book Distribution** **Learning Contracts/Parent Paired Reading**		**Book Distribution**	**Book Distribution**
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Pullout Program** **Small Groups** *Basal Readers* *One-on-One Tutoring*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Pullout Program** **Small Groups** *Basal Readers* *One-on-One Tutoring* *Reading Canon* *Trade Books*	**Small Groups** *One-on-One Tutoring* *Reading Canon*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Small Groups** *Basal Readers* *One-on-One Tutoring* *Reading Canon* *Trade Books*	**Diagnostic Procedures** **Frequent Assessment** **Interactive Learning** **Small Groups** *Basal Readers* *One-on-One Tutoring* *Reading Canon* *Trade Books*
CLASSROOM INSTRUCTION	**Collaborative Teams** **Drama** **Echo or Choral Reading** **Learning Contract/ Student** **Multisensory Activities** **Reading Drills** *Pacing Oral Reading* *Storytelling* *Paired Reading*	**Collaborative Teams** **Drama** **Echo or Choral Reading** **Essays** **Interpreting/Discussion** **Learning Contract/ Student** **Meaning** **Context/Predicting** **Multisensory Activities** *Big Books* *Creative Writing* *Journals* *Pacing Oral Reading* *Paired Reading* *Silent Individual Reading* *Storytelling*	**Collaborative Teams** **Essays** **Interpreting/Discussion** **Meaning** **Context/Predicting** *Creative Writing* *Journals*	**Collaborative Teams** **Drama** **Essays** **Interpreting/Discussion** **Meaning** **Context/Predicting** *Big Books* *Creative Writing* *Silent Individual Reading*	**Collaborative Teams** **Drama** **Essays** **Interpreting/Discussion** **Meaning** **Context/Predicting** *Silent Individual Reading*

E. First Steps

First Steps is a systemic early reading reform that addresses the learning standards in reading for early elementary and that includes feature that helps schools address students who are challenged learning to read through middle school. It can be included as component of a locally developed CSR model.

- **First Steps** reform process features that enable schools to address all types of state learning standards (Table D.1).
- **First Steps** program features that address Minnesota's learning standards in reading (Table D.2).
- **First Steps** program features that address Minnesota's learning standards in math (Not applicable).
- **First Steps** program features that address Minnesota's learning standards in inquiry (Not Applicable).

Table E.1. First Steps
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	**School-Site Training**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table E.2. First Steps

Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	[Formative Program Evaluation]	[Formative Program Evaluation]	[Formative Program Evaluation]	[Formative Program Evaluation]	[Formative Program Evaluation]
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Child-Centered Developmental Whole Language	Child-Centered Developmental Student Empowerment Whole Language	Child-Centered Developmental	Child-Centered Developmental Student Empowerment	Child-Centered Developmental Student Empowerment
PROFESSIONAL DEVELOPMENT	Networking On-Site Facilitator [Teacher Inquiry Portfolios]	Networking On-Site Facilitator [Teacher Inquiry Portfolios]	[On-Site Facilitator]	Networking On-Site Facilitator [Teacher Inquiry Portfolios]	Networking On-Site Facilitator
PARENT/COMMUNITY INVOLVEMENT	Parent Communication Parent Instructional Training *Paired Reading*	Parent Communication Parent Instructional Training *Paired Reading*	[Parent Communication]	[Parent Communication]	[Parent Communication]
ORGANIZATIONAL/ STRUCTURAL	Diagnostic Procedures Frequent Assessment Literacy Rich Environment Small Groups	Diagnostic Procedures Frequent Assessment Literacy Rich Environment Small Groups Trade Books	Diagnostic Procedures Small Groups	Diagnostic Procedures Frequent Assessment Literacy Rich Environment Small Groups Trade Books	Diagnostic Procedures Frequent Assessment Literacy Rich Environment Small Groups Trade Books
CLASSROOM INSTRUCTION	Invented Spelling Performance Assessment Scaffolding Storytelling	Big Books Creative Writing Essays Interpreting/discussion Journals Meaning Context/Predicting Performance Assessment Scaffolding Self-Selected Reading Silent Individual Reading Storytelling Writing Mechanics	Creative Writing Essays Interpreting/discussion Journals Meaning Context/Predicting Performance Assessment Scaffolding	Big Books Creative Writing Essays Interpreting/discussion Meaning Context/Predicting Performance Assessment Scaffolding Self-Selected Reading Silent Individual Reading	Essays Interpreting/discussion Meaning Context/Predicting Performance Assessment Scaffolding Self-Selected Reading Silent Individual Reading

F. Lightspan Achieve Now

Lightspan Achieve Now is a technology-based curriculum (reading and math) reform designed to be used by schools that use standards as the basis for planning and delivering instruction. It can be included as a component of a locally developed CSR model.

- **Lightspan** reform process features that enable schools to address all types of state learning standards (Table A.1).
- **Lightspan** program features that address Minnesota's learning standards in reading (Table A.2).
- **Lightspan** program features that address Minnesota's learning standards in math (Table A.3).
- **Lightspan** program features that address Minnesota's learning standards in inquiry (Table A.4).

Table F.1. Lightspan Achieve Now
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	
IMPLEMENTED THEORY/PHILOSOPHY	**Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**Networking (Internet resources/ standards and assessment)** **School-Site Training** **In-Service Workshop**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table F.2. Lightspan Achieve Now
Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/ Vocabulary*	*Comprehension*	*Applied Learning/ Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Phonological Awareness** **Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**[Networking/ Internet]**	**[Networking/ Internet]**	**[Networking/ Internet]**	**[Networking/ Internet]**	**[Networking/ Internet]**
PARENT/COMMUNITY INVOLVEMENT	**[Parent Instructional Training]**	**[Parent Instructional Training]**	**[Parent Instructional Training]**	**[Parent Instructional Training]**	**[Parent Instructional Training]**
	Learning Contracts/ Parent	**Learning Contracts/ Parent**	**[Learning Contracts/ Parent]**	**[Learning Contracts/ Parent]**	**[Learning Contracts/ Parent]**
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessment** **Individualized Instruction** **Supplemental Learning** *Interactive Learning* *One-on-One Tutoring* *Pullout Program* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessment** **Individualized Instruction** **Supplemental Learning** **Thematic Units** *Interactive Learning* *One-on-One Tutoring* *Pullout Program* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Individualized Instruction** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessment** **Individualized Instruction** **Supplemental Learning** **Thematic Units** *Interactive Learning* *One-on-One Tutoring* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessment** **Individualized Instruction** **Supplemental Learning** **Thematic Units** *Interactive Learning* *One-on-One Tutoring* *Small Groups*
CLASSROOM INSTRUCTION	**Computer Assisted Instruction** **Echo or Choral Reading** **Invented Spelling** **Pacing Oral Reading** **Performance Assessment** **Paired Reading**	**Computer Assisted Instruction** **Echo or Choral Reading** **Creative Writing** **Essays** **Interpreting/Discussion** **Journals** **Meaning Context/ Predicting** **Pacing Oral Reading** **Paired Reading** **Performance Assessment** **Silent Individual Reading**	**[Computer Assisted Instruction]** **Computer as a Tool** **Creative Writing** **Essays** **Interpreting/Discussion** **Journals** **Meaning Context/ Predicting** **Performance Assessment**	**Computer Assisted Instruction** **Computer as a Tool** **Creative Writing** **Essays** **Interpreting/Discussion** **Meaning Context/ Predicting** **Performance Assessment** **Silent Individual Reading**	**Computer Assisted Instruction** **Computer as a Tool** **Essays** **Interpreting/Discussion** **Meaning Context/ Predicting** **Performance Assessment** **Silent Individual Reading**

Table F.3. Lightspan Achieve Now
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	**[Formative Program Evaluation]**	N/A	N/A
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**	**Standards-Based Instruction**	N/A	N/A
PROFESSIONAL DEVELOPMENT	**[Networking/ Internet]**	**[Networking/ Internet]**	**[Networking/ Internet]**	**[Networking/ Internet]**	N/A	N/A
PARENT/ COMMUNITY INVOLVEMENT	**[Parent Instructional Training]**	**[Parent Instructional Training]**	**[Parent Instructional Training]**	**[Parent Instructional Training]**	N/A	N/A
	Learning Contracts/ Parent	**Learning Contracts/ Parent**	**[Learning Contracts/ Parent]**	**[Learning Contracts/ Parent]**		
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessments** **Individual Instruction** **Interactive Learning** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Pullout Program* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessments** **Individual Instruction** **Interactive Learning** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Pullout Program* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Individual Instruction** **Interactive Learning** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Small Groups*	**Diagnostic Procedures** **Flexible Grouping** **Frequent Assessments** **Individual Instruction** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Small Groups*	N/A	N/A
CLASSROOM INSTRUCTION	**Collaborative Teams** **Computer as a Tool** **Computer Assisted Instruction** **Manipulatives** **Performance Assessment** **Problem-Solving** *Project-Based Instruction*	**Collaborative Teams** **Computer as a Tool** **Computer Assisted Instruction** **Manipulatives** **Performance Assessment** **Problem-Solving** *Project-Based Instruction*	**Collaborative Teams** **Computer as a Tool** **Computer Assisted Instruction** **Manipulatives** **Performance Assessment** **Problem-Solving** *Project-Based Instruction*	**Collaborative Teams** **Computer as a Tool** **Computer Assisted Instruction** **Performance Assessment** **Problem-Solving** *Project-Based Instruction*	N/A	N/A

G. Modern Red Schoolhouse

Modern Red Schoolhouse is a process-oriented reform that is designed to redesign their classroom practices to enable schools to meet state learning standards.

- **Modern Red Schoolhouse** reform-process features that enable schools to address all types of state learning standards (Table E.1).
- **Modern Red Schoolhouse** program features that address Minnesota's learning standards in reading (Table E.2).
- **Modern Red Schoolhouse** program features that address Minnesota's learning standards in math (Table E.3).
- **Modern Red Schoolhouse** program features that address Minnesota's learning standards in inquiry (Table E.4).

Table G.1. Modern Red Schoolhouse
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Backmapping** **Instructional Guidance** **Taking Stock** **Study Group/Teacher**
IMPLEMENTED THEORY/PHILOSOPHY	**Prescribed Curriculum (Teacher Developed)** **Standards-Based Instruction**
PROFESSIONAL DEVELOPMENT	**In-Service Workshops** **Teacher Collaboration** **School-Site Training**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table G.2. Modern Red Schoolhouse
Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	**Instructional Guidance** **Systematic Learning** **Study Group/Teacher** *[Community Partnerships]*	**Instructional Guidance** **Systematic Learning** **Study Group/Teacher**	**Instructional Guidance** **Systematic Learning** **Study Group/Teacher** *[Community Partnerships]*	**Instructional Guidance** **Systematic Learning** **Study Group/Teacher**	**Instructional Guidance** **Systematic Learning** **Study Group/Teacher**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Child-Centered Developmental** **Phonological Awareness** **Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction**	**Child-Centered Developmental** **Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction** **Student Empowerment** **Whole Language**	**Child-Centered Developmental** **Concept Development** **Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction**	**Concept Development** **Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction** **Student Empowerment**	**Concept Development** **Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction** **Student Empowerment**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshops]**	**[In-Service Workshops]**	**[In-Service Workshops]**	**[In-Service Workshops]**	**[In-Service Workshops]**
PARENT/COMMUNITY INVOLVEMENT	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*
ORGANIZATIONAL/ STRUCTURAL	**Flexible Grouping** **Frequent Assessment** *Individualized Instruction* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Frequent Assessment** **Thematic Units** *Individualized Instruction* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Thematic Units** *Individualized Instruction* *Small Groups*	**Flexible Grouping** **Frequent Assessment** **Thematic Units** *Individualized Instruction* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Frequent Assessment** **Thematic Units** *Individualized Instruction* *Interactive Learning* *Small Groups*
CLASSROOM INSTRUCTION	**Performance Assessment** *Collaborative Teams* *[Learning Contracts/Student]*	**Cultural Literacy** **Performance Assessment** **Project-Based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contracts/Student]*	**Computer as a Tool** **Performance Assessment** **Project-Based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contracts/Student]*	**Computer as a Tool** **Performance Assessment** **Project-Based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contracts/Student]*	**Computer as a Tool** **Performance Assessment** **Project-Based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contracts/Student]*

Table G.3. Modern Red Schoolhouse
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	Instructional Guidance Systematic Learning Study Group/ Teacher	Instructional Guidance Systematic Learning Study Group/ Teacher	Instructional Guidance Systematic Learning Study Group/Teacher	Instructional Guidance Systematic Learning Study Group/Teacher	Instructional Guidance Systematic Learning Study Group/Teacher	Instructional Guidance Systematic Learning Study Group/Teacher *[Community Partnerships]*
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Concept Development Child-Centered Developmental Prescribed Curriculum/TD Self-Extending System Standards-Based Instruction Student Empowerment	Concept Development Child-Centered Developmental Prescribed Curriculum/TD Self-Extending System Standards-Based Instruction	Concept Development Child-Centered Developmental Prescribed Curriculum/TD Self-Extending System Standards-Based Instruction Student Empowerment	Concept Development Prescribed Curriculum/TD Self-Extending System Standards-Based Instruction	Concept Development Prescribed Curriculum/TD Self-Extending System Standards-Based Instruction	Concept Development Prescribed Curriculum/TD Self-Extending System Student Empowerment Standards-Based Instruction
PROFESSIONAL DEVELOPMENT	[In-Service Workshops]	[In-Service Workshops]	[In-Service Workshops]	[In-Service Workshops]	[In-Service Workshops]	[In-Service Workshops]
PARENT/COMMUNITY INVOLVEMENT	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*
ORGANIZATIONAL/ STRUCTURAL	Flexible Grouping Frequent Assessments Thematic Units *Individualized Instruction* *Interactive Learning* *Small Groups* *Supplemental Learning*	Flexible Grouping Frequent Assessments Thematic Units *Individualized Instruction* *Interactive Learning* *Small Groups* *Supplemental Learning*	Flexible Grouping Frequent Assessments Thematic Units *Individualized Instruction* *Supplemental Learning* *Interactive Learning* *Small Groups*	Flexible Grouping Frequent Assessments Thematic Units *Individualized Instruction* *Small Groups* *Supplemental Learning*	Flexible Grouping Frequent Assessments *Individualized Instruction* *Small Groups* *Supplemental Learning*	Flexible Grouping Frequent Assessments Thematic Units *Individualized Instruction* *Interactive Learning* *Small Groups* *Supplemental Learning*
CLASSROOM INSTRUCTION	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *[Learning Contracts/Student]* *Manipulatives*	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *Manipulatives* *[Learning Contracts/Student]*	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *Manipulatives* *[Learning Contracts/Student]*	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *[Learning Contracts/Student]*	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *[Learning Contracts/Student]*	Computer as a Tool Performance Assessment Project-Based Instruction *Authentic Instruction* *Collaborative Teams* *Interpreting/Discussion* *[Learning Contracts/Student]*

Table G.4. Modern Red Schoolhouse
Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**	**Instructional Guidance** **Study Group/Teacher**
PROFESSIONAL DEVELOPMENT	**Teacher Collaboration**	**Teacher Collaboration**	**Teacher Collaboration**	**Teacher Collaboration**	**Teacher Collaboration**	**Teacher Collaboration**	**Teacher Collaboration**
IMPLEMENTED THEORY/ PHILOSOPHY	**Prescribed Curriculum/TD** **Standards-Based Instruction** **Student Empowerment**	**Prescribed Curriculum/TD** **Standards-Based Instruction** **Student Empowerment**	**Prescribed Curriculum/TD** **Standards-Based Instruction** **Student Empowerment**	**Prescribed Curriculum/TD** **Standards-Based Instruction** **Student Empowerment**	**Prescribed Curriculum/TD** **Standards-Based Instruction**	**Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction** **Student Empowerment**	**Prescribed Curriculum/TD** **Self-Extending System** **Standards-Based Instruction** **Student Empowerment**
PARENT/ COMMUNITY INVOLVEMENT	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*	*[Learning Contracts/Parent]*
ORGANIZATIONAL/STRUCTURAL	**Flexible Grouping** **Thematic Units** *Small Groups*	**Flexible Grouping** **Thematic Units** *Interactive Learning* *Small Groups*	**Flexible Grouping** **Thematic Units** *Individualized Instruction* *Interactive Learning* *Small Groups*	**Flexible Grouping** **Thematic Units** *Individualized Instruction* *Small Groups*	**Flexible Grouping** *Individualized Instruction* *Interactive Learning*	**Flexible Grouping** **Thematic Units** *Individualized Instruction*	**Flexible Grouping** **Thematic Units** *Individualized Instruction*
CLASSROOM INSTRUCTION	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contract/ Student]* *Manipulatives*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contract/ Student]*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contract/ Student]*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *Collaborative Teams* *[Learning Contract/ Student]*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *[Learning Contract/ Student]*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *[Learning Contract/ Student]*	**Computer as a Tool** **Project-based Instruction** *Authentic Instruction* *[Learning Contract/ Student]*

H. School Development Program

School Development Program is a process-oriented reform that focuses on school improvement and community development. The model includes reform features that could help schools organize to address state standards.

- **SDP** reform-process features that enable schools to address all types of state learning standards (Table F.1).
- **SDP** program features that address Minnesota's learning standards in reading (Table F.2).
- **SDP** program features that address Minnesota's learning standards in math (Table F. 3).
- **SDP** program features that address Minnesota's learning standards in inquiry (Table F.4).

Table H.1. School Development Program
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Instructional Guidance** **Study Group/School**
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	**In-Service Workshops** **Training of Trainers/ Balanced Curriculum Process**

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table H.2. School Development Program

Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	[Community Partnership] [Instructional Guidance] [Parent Community Group] [Study Group/School]	[Community Partnership] [Instructional Guidance] [Parent Community Group] [Study Group/School]	[Community Partnership] [Instructional Guidance] [Parent Community Group] [Study Group/School]	[Community Partnership] [Instructional Guidance] [Parent Community Group] [Study Group/School]	[Community Partnership] [Instructional Guidance] [Parent Community Group] [Study Group/School]
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Acceleration Child Centered-Developmental Phonological Awareness Self-Extending System Whole Language	Acceleration Child Centered-Developmental Self-Extending System Student Empowerment	Child Centered-Developmental Self-Extending System	Child Centered-Developmental Self-Extending System Student Empowerment	Child Centered-Developmental Self-Extending System Student Empowerment
PROFESSIONAL DEVELOPMENT	[In-Service Workshop] *[Peer Review/Observation]*	[In-Service Workshop] *[Peer Review/Observation]*	[In-Service Workshop] *[Peer Review/Observation]*	[In-Service Workshop] *[Peer Review/Observation]*	[In-Service Workshop] *[Peer Review/Observation]*
PARENT/COMMUNITY INVOLVEMENT	[Parent Participation in SBM]	[Parent Participation in SBM]			
ORGANIZATIONAL/ STRUCTURAL	Diagnostic Procedures Pullout Program Small Groups *Basal Readers* *Supplemental Learning*	Diagnostic Procedures Pullout Program Small Groups *Basal Readers* *Reading Canon* *Supplemental Learning* *Trade Books*	Diagnostic Procedures Small Groups *Reading Canon* *Supplemental Learning*	Diagnostic Procedures Small Groups *Basal Readers* *Supplemental Learning* *Reading Canon* *Trade Books*	Diagnostic Procedures Small Groups *Basal Readers* *Supplemental Learning* *Reading Canon* *Trade Books*
CLASSROOM INSTRUCTION	Collaborative Teams Performance Assessment *Echo or Choral Reading* *Pacing Oral Reading* *Paired Reading*	Collaborative Teams Performance Assessment *Creative Writing* *Echo or Choral Reading* *Essays* *Pacing Oral Reading* *Paired Reading* *Silent Individual Reading* *Writing Mechanics*	Collaborative Teams Performance Assessment *Creative Writing* *Essays*	Collaborative Teams Performance Assessment *Creative Writing* *Essays* *Silent Individual Reading*	Collaborative Teams Performance Assessment *Essays* *Silent Individual Reading*

Table H.3. School Development Program
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**	**[Community Partnership]** **[Instructional Guidance]** **[Parent Community Group]** **[Study Group/School]**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Accelerations** **Child Centered-Developmental** **Self-Extending System** **Student Empowerment**	**Child Centered-Developmental** **Self-Extending System**	**Child Centered-Developmental** **Self-Extending System** **Student Empowerment**	**Self-Extending System**	**Self-Extending System**	**Self-Extending System** **Student Empowerment**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshop]** *[Peer Review/ Observation]*	**[In-Service Workshop]** *[Peer Review/ Observation]*	**[In-Service Workshop]** *[Peer Review/ Observation]*	**[In-Service Workshop]** *[Peer Review/ Observation]*	**[In-Service Workshop]** *[Peer Review/ Observation]*	**[In-Service Workshop]** *[Peer Review/ Observation]*
PARENT/COMMUNITY INVOLVEMENT						
ORGANIZATIONAL/ STRUCTURAL	**Small Groups** *Individualized Instruction* *Frequent Assessments* *Supplemental Learning*	**Small Groups** *Individualized Instruction* *Frequent Assessments* *Supplemental Learning*	**Small Groups** *Individualized Instruction* *Supplemental Learning*	**Small Groups** *Individualized Instruction* *Frequent Assessments* *Supplemental Learning*	**Small Groups** *Individualized Instruction* *Frequent Assessments* *Supplemental Learning*	**Small Groups** *Individualized Instruction* *Frequent Assessments* *Supplemental Learning*
CLASSROOM INSTRUCTION	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Manipulatives* *Worksheets/Workbooks*	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Manipulatives* *Worksheets/Workbooks*	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Manipulatives* *Worksheets/Workbooks*	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Worksheets/Workbooks*	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Worksheets/Workbooks*	**Performance Assessment** **Collaborative Teams** *Authentic Instruction* *Worksheets/Workbooks*

Table H.4. School Development Program

Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject area Research*	*Research Process*
SCHOOLWIDE	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**	**[Instructional Guidance]**
IMPLEMENTED THEORY/ PHILOSOPHY	**Student Empowerment**	**Student Empowerment**	**Student Empowerment**	**Student Empowerment**		**Student Empowerment** **Self-Extending System**	**Student Empowerment** **Self-Extending System**
PROFESSIONAL DEVELOPMENT	**[In-Service Workshop]**	**[In-Service Workshop]**	**[In-Service Workshop]**	**[In-Service Workshop]**	**[In-Service Workshop]**	**[In-Service Workshop]**	**[In-Service Workshop]**
PARENT/ COMMUNITY INVOLVEMENT							
ORGANIZATIONAL/ STRUCTURAL	**Small Groups**	**Small Groups**	**Small Groups** *Individualized Instruction*	**Small Groups** *Individualized Instruction*	*Individualized Instruction*	*Individualized Instruction*	*Individualized Instruction*
CLASSROOM INSTRUCTION	**Collaborative Teams** *Authentic Instruction* *Manipulatives*	**Collaborative Teams** *Authentic Instruction*	**Collaborative Teams** *Authentic Instruction*	**Collaborative Teams** *Authentic Instruction*	*Authentic Instruction*	*Authentic Instruction* *Individualized Instruction*	*Authentic Instruction* *Individualized Instruction*

I. Success for All

Success for All is a systemic reform model that includes classroom practices that enable elementary schools to implement classroom practices that help them meet state standards in reading and math. The model has few program features that might enable them to address standards in other areas.

- **SFA** reform-process features that enable schools to address other types of state learning standards (Table G.1).
- **SFA** program features that address Minnesota's learning standards in reading (Table G.2).
- **SFA** program features that address Minnesota's learning standards in math (Table G.3).
- **SFA** program features that address Minnesota's learning standards in inquiry (Table G.4).

Table I.1. Success for All
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table I.2. Success for All

Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE	Systematic Learning	Systematic Learning	[Systematic Learning]	[Systematic Learning]	[Systematic Learning]
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	Phonological Awareness Prescribed Curriculum Prescribed Teacher Practices Whole Language	Prescribed Curriculum Prescribed Teacher Practices Thematic Teaching Whole Language	[Prescribed Curriculum] [Prescribed Teacher Practices] Thematic Teaching	[Prescribed Curriculum] [Prescribed Teacher Practices] Thematic Teaching	[Prescribed Curriculum] [Prescribed Teacher Practices] Thematic Teaching
PROFESSIONAL DEVELOPMENT	In-Service Workshop On-Site Specialist On-Site Facilitator School-Site Training	In-Service Workshop On-Site Specialist On-Site Facilitator School-Site Training	[In-Service Workshop] [On-Site Specialist] [On-Site Facilitator]	[In-Service Workshop] [On-Site Specialist] [On-Site Facilitator]	[In-Service Workshop] [On-Site Specialist] [On-Site Facilitator]
PARENT/COMMUNITY INVOLVEMENT	Parent Instruction Training Paired Reading	Parent Instruction Training Paired Reading			
ORGANIZATIONAL/ STRUCTURAL	Ability Grouping Basal Readers Diagnostic Procedures Frequent Assessment Interactive Learning Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups	Ability Grouping Basal Readers Diagnostic Procedures Frequent Assessment Interactive Learning Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Trade Books	Ability Grouping One-on-One Tutoring Small Groups	Ability Grouping Basal Readers Diagnostic Procedures Frequent Assessment Interactive Learning Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Trade Books	Ability Grouping Basal Readers Diagnostic Procedures Interactive Learning Frequent Assessment Literacy Rich Environment One-on-One Tutoring Ongoing Written Observations Small Groups Trade Books
CLASSROOM INSTRUCTION	Collaborative Teams Cooperative Learning Drama Highly Scripted Lessons Multisensory Activities Pacing Oral Reading Paired Reading Reading Drills Storytelling Worksheets/ Workbooks	Advanced Writing Mechanics Big Books Collaborative Teams Cooperative Learning Creative Writing Drama Highly Scripted Lessons Interpreting/Discussion Meaning Context/Predicting Multisensory Activities Pacing Oral Reading Paired Reading Silent Individual Reading Storytelling Worksheets/Workbooks Writing Mechanics	Collaborative Teams Cooperative Learning Creative Writing Highly Scripted Lessons Interpreting/Discussion Meaning Context/Predicting Paired Reading Worksheets/Workbooks	Advanced Writing Mechanics Big Books Collaborative Teams Composition Mechanics Cooperative Learning Creative Writing Drama Interpreting/Discussion Meaning Context/Predicting Silent Individual Reading Worksheets/Workbooks	Collaborative Teams Cooperative Learning Drama Interpreting/Discussion Meaning Context/Predicting Silent Individual Reading Worksheets/Workbooks

Table I.3. Success for All—Math Wings
Program Features That Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**Systematic Learning**	**Systematic Learning**	**Systematic Learning**	N/A	N/A	N/A
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Concept Development** **Prescribed Curriculum** **Prescribed Teacher Practices** **Thematic Teaching**	**Concept Development** **Prescribed Curriculum** **Prescribed Teacher Practices** **Thematic Teaching**	**Concept Development** **Prescribed Curriculum** **Prescribed Teacher Practices** **Thematic Teaching**	N/A	N/A	N/A
PROFESSIONAL DEVELOPMENT	**In-Service Workshop** **On-Site Facilitator** **On-Site Specialist** **[Peer Review/ Observation]** **School-Site Training**	**In-Service Workshop** **On-Site Facilitator** **On-Site Specialist** **[Peer Review/ Observation]** **School-Site Training**	**In-Service Workshop** **On-Site Facilitator** **On-Site Specialist** **[Peer Review/ Observation]** **School-Site Training**	N/A	N/A	N/A
PARENT/COMMUNITY INVOLVEMENT	**[Parent Communication]**	**[Parent Communication]**	**[Parent Communication]**	N/A	N/A	N/A
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Frequent Assessment** **Heterogeneous Groups** **Individualized Instruction** **Interactive Learning** **Ongoing Written Observations** **Remedial Methodologies** **Small Groups** **Supplemental Learning** **Thematic Units**	**Diagnostic Procedures** **Frequent Assessments** **Heterogeneous Groups** **Individualized Instruction** **Interactive Learning** **Ongoing Written Observations** **Remedial Methodologies** **Small Groups** **Supplemental Learning** **Thematic Units**	**Diagnostic Procedures** **Heterogeneous Groups** **Individualized Instruction** **Interactive Learning** **Ongoing Written Observations** **Small Groups** **Supplemental Learning** **Thematic Units**	N/A	N/A	N/A
CLASSROOM INSTRUCTION	**Calculator as a Tool** **Collaborative Teams** **Cooperative Learning** **Interpreting/Discussion/Math** **Highly Scripted Lessons** **Manipulatives** **Problem-Solving** **Worksheets/Workbooks**	**Collaborative Teams** **Cooperative Learning** **Interpreting/Discussion/ Math** **Highly Scripted Lessons** **Manipulatives** **Problem-Solving** **Worksheets/Workbooks**	**Calculator as a Tool** **Collaborative Teams** **Cooperative Learning** **Interpreting/Discussion Math** **Manipulatives** **Problem-Solving** **Supplemental Learning** **Worksheets/Workbooks**	N/A	N/A	N/A

Table I.4. Success for All
Program Features That Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE			N/A	N/A	N/A	N/A	N/A
IMPLEMENTED THEORY/ PHILOSOPHY	**Thematic Teaching**	**Thematic Teaching**	N/A	N/A	N/A	N/A	N/A
PROFESSIONAL DEVELOPMENT			N/A	N/A	N/A	N/A	N/A
PARENT/ COMMUNITY INVOLVEMENT			N/A	N/A	N/A	N/A	N/A
ORGANIZATIONAL/ STRUCTURAL	**Small Groups Thematic Units**	**Small Groups Thematic Units**	N/A	N/A	N/A	N/A	N/A
CLASSROOM INSTRUCTION	**Collaborative Teams Cooperative Learning Manipulatives Problem-Solving**	**Collaborative Teams Cooperative Learning**	N/A	N/A	N/A	N/A	N/A

J. Talent Development Career Academies

Talent Development Career Academies is a systemic and process-oriented reform that includes features that help high schools address learning standards within learning communities created in the school.

- **TDCA** reform-process features that enable schools to address other types of state learning standards (Table H.1).
- **TDCA** program features that address Minnesota's learning standards in reading (Table H.2).
- **TDCA** program features that address Minnesota's learning standards in math (Table H.3).
- **TDCA** program features that address Minnesota's learning standards in inquiry (Table H.4).

Table J.1. Talent Development Career Academy
Reform Process Program Features That Address State Standards

Program Component	*Aligning Curriculum and Instruction to Standards*
SCHOOLWIDE	**Reform Team** **Study Groups/Teachers**
IMPLEMENTED THEORY/PHILOSOPHY	
PROFESSIONAL DEVELOPMENT	

KEY TO CSR STANDARDS TABLES:

Features in white text boxes have direct effects on student outcomes.

Features in gray text boxes have indirect effects on student outcomes.

[Bracketed Features] can have direct or indirect effects on student outcomes. These features only have an effect when the specific standards are addressed by the feature.

Bolded Features are always present in the model.

Italicized Features are sometimes present in schools implementing the model but are not required by the model.

Table J.2. Talent Development Career Academy
Program Features That Address Minnesota Reading Standards

Program Component	*Phonics/Literacy/Vocabulary*	*Comprehension*	*Applied Learning/Technical*	*Interpretation*	*Evaluation*
SCHOOLWIDE		**[Specialized Course of Study]** **Study Group/Teachers**	**[Community Partnership]** **[Specialized Course of Study]** **Study Group/Teachers**	**[Specialized Course of Study]** **Study Group/Teachers**	**[Specialized Course of Study]** **Study Group/Teachers**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL		**Acceleration** **Thematic Teaching**	**Thematic Teaching**	**Acceleration (HS)** **Thematic Teaching**	**Acceleration (HS)** **Thematic Teaching**
PROFESSIONAL DEVELOPMENT		**[In-Service Workshop]** **[On-Site Specialist]** **[Peer Review/Observation]** **[Teacher Collaboration]**	**[In-Service Workshop]** **[On-Site Specialist]** **[Peer Review/Observation]** **[Teacher Collaboration]**	**[In-Service Workshop]** **[On-Site Specialist]** **[Peer Review/Observation]** **[Teacher Collaboration]**	**[In-Service Workshop]** **[On-Site Specialist]** **[Peer Review/Observation]** **[Teacher Collaboration]**
PARENT/COMMUNITY INVOLVEMENT					
ORGANIZATIONAL/ STRUCTURAL		**Diagnostic Procedures** **Double Periods/English** **Flexible Grouping** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods /English** **Flexible Grouping** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods /English** **Flexible Grouping** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods /English** **Flexible Grouping** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *Peer Tutoring* *Small Groups*
CLASSROOM INSTRUCTION		**Authentic Instruction** **Performance Assessment** **Collaborative Teams** *Advanced Writing Mechanics* *Essays* *Journals* *Writing Mechanics*	**Authentic Instruction** **Collaborative Teams** **Performance Assessment** *Computer as a Tool* *Essays* *Journals*	**Authentic Instruction** **Collaborative Teams** **Performance Assessment** *Advanced Writing Mechanics* *Computer as a Tool* *Essays*	**Authentic Instruction** **Collaborative Teams** **Performance Assessment** *Computer as a Tool* *Essays*

Table J.3. Talent Development Career Academy
Program Features that Address Minnesota Math Standards

Program Component	*Numeracy/Operations/ Problem Solving*	*Math Concepts: Algebraic and Geometric Reasoning/ Measurement*	*Math Concepts: Data Analysis and Probability*	*Advanced Math: Algebra*	*Advanced Math: Discrete Math*	*Advanced Math: Technical Applications*
SCHOOLWIDE	**Study Group/Teachers**	**Study Group/Teachers**	**[Specialized Courses of Study]** **Study Group/Teachers**	**Study Group/Teachers**	**Study Group/Teachers**	**[Community Partnership]** **[Specialized Courses of Study]** **Study Group/Teachers**
IMPLEMENTED THEORETICAL/ PHILOSOPHICAL	**Acceleration** **Thematic Teaching**	**Thematic Teaching**	**Thematic Teaching**	**Acceleration (HS)** **Thematic Teaching**	**Thematic Teaching**	**Thematic Teaching**
PROFESSIONAL DEVELOPMENT	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**	**[On-Site Specialist]** **[Peer Review/ Observation]** **[Teacher Collaboration]**
PARENT/COMMUNITY INVOLVEMENT						
ORGANIZATIONAL/ STRUCTURAL	**Diagnostic Procedures** **Flexible grouping** **Frequent Assessment** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *One-on-One Tutoring* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Flexible grouping** **Frequent Assessment** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *One-on-One Tutoring* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Flexible grouping** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *One-on-One Tutoring* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods/Math** **Flexible grouping** **Frequent Assessment** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *One-on-One Tutoring* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods /Math** **Flexible grouping** **Frequent Assessment** **Heterogeneous Groups** **Supplemental Learning** *Individualized Instruction* *One-on-One Tutoring* *Peer Tutoring* *Small Groups*	**Diagnostic Procedures** **Double Periods /Math** **Flexible grouping** **Frequent Assessment** **Heterogeneous Groups** **Supplemental Learning** **Thematic Units** *Individualized Instruction* *One-on-One Tutoring* *Peer Tutoring* *Small Groups*
CLASSROOM INSTRUCTION	**Authentic Instruction** **Calculators as Tools** **Collaborative Teams** **Manipulatives** **Performance Assessment** **Project-Based Instruction** **Problem-Solving** *Computer Assisted Instruction* *Computer as a Tool* *Interpreting/Discussion/ Math*	**Authentic Instruction** **Collaborative Teams** **Manipulatives** **Performance Assessment** **Project-Based Instruction** **Problem-Solving** *Computer Assisted Instruction* *Computer as a Tool* *Interpreting/Discussion/ Math*	**Authentic Instruction** **Calculators as Tools** **Collaborative Teams** **Manipulatives** **Performance Assessment** **Project-Based Instruction** **Problem-Solving** *Computer Assisted Instruction* *Computer as a Tool* *Interpreting/Discussion/ Math*	**Authentic Instruction** **Collaborative Teams** **Calculators as Tools** **Performance Assessment** **Project-Based Instruction** **Problem-Solving** *Computer Assisted Instruction* *Computer as a Tool* *Interpreting/Discussion/ Math*	**Authentic Instruction** **Collaborative Teams** **Calculators as Tools** **Performance Assessment** **Project-Based Instruction** **Problem-Solving** *Computer as a Tool* *Interpreting/Discussion/ Math*	**Authentic Instruction** **Calculators as Tools** **Collaborative Teams** **Performance Assessment** **Project-Based Instruction** *Computer as a Tool* *Interpreting/Discussion/ Math*

Table J.4. Talent Development Career Academy
Program Features that Address Minnesota Inquiry Standards

Program Component	*Data Categorization, Classification and Recording*	*Media, Observation, and Investigation*	*Direct Observation*	*Accessing Information*	*Controlled Experiments*	*Subject Area Research*	*Research Process*
SCHOOLWIDE						**[Specialized Courses of Study]**	**[Specialized Courses of Study]**
IMPLEMENTED THEORY/ PHILOSOPHY			**Thematic Teaching**	**Thematic Teaching**		**Thematic Teaching**	**Thematic Teaching**
PROFESSIONAL DEVELOPMENT							
PARENT/ COMMUNITY INVOLVEMENT							
ORGANIZATIONAL/ STRUCTURAL			**Flexible Grouping** **Thematic Units** *Individualized Instruction* *Small Groups*	**Flexible Grouping** **Thematic Units** *Individualized Instruction* *Small Groups*	**Flexible Grouping** *Individualized Instruction*	**Thematic Units** *Individualized Instruction*	**Thematic Units** *Individualized Instruction*
CLASSROOM INSTRUCTION			**Authentic Instruction** **Problem-Solving** **Project-Based Instruction** **Collaborative Teams** *Computer as a Tool*	**Authentic Instruction** **Project-Based Instruction** **Collaborative Teams** *Computer as a Tool*	**Authentic Instruction** **Project-Based Instruction** *Computer as a Tool*	**Authentic Instruction** **Project-Based Instruction** *Computer as a Tool*	**Authentic Instruction** **Project-Based Instruction** *Computer as a Tool*

Part II: Comparing CSR Models

Part II provides a systematic review of CSR models. The reviews of each model consider:

- **Reform Program Features:** Schoolwide processes, implemented theory/philosophy, professional development, and parent/community involvement.
- **Reading/Language Arts Program Features:** Organizational/Structural features, instructional features, and learning outcomes related to literacy and language education.
- **Math Program Features:** Organizational/Structural features, instructional features, and learning outcomes related to math.

The ten CSR models reviewed in Part II are:

A. **Accelerated Schools Project:** A process-oriented reform emphasizing constructivist learning and reflective practices for elementary and middle schools.

B. **America's Choice:** A process-oriented reform geared toward providing rigorous, standards-based courses of study in elementary, middle, and high schools.

C. **ATLAS Communities:** A process-oriented reform using professional development and collaboration to develop K-12 pathways within school systems.

D. **Early Intervention in Reading:** A comprehensive reading intervention designed to help elementary school children who are struggling to learn to read.

E. **First Steps:** A classroom-based intervention that tightens linkages between diagnostic observation and classroom instruction in reading. Most extensively used in elementary schools, although the program can be extended to Grade 10.

F. **Lightspan Achieve Now:** A computer-assisted instruction package that can be an integral part of a comprehensive reform.

G. **Modern Red Schoolhouse:** A process-oriented, standards-driven reform for elementary, middle, and high schools.

H. **School Development Program:** A systemic, process-oriented reform that focuses on meeting learning standards in elementary schools, as well as focusing on community mental health.

I. **Success for All:** A systemic reform for elementary schools that provides a curriculum and well-defined instructional practices for elementary schools in reading, math, social studies, and science.

J. **Talent Development Career Academies:** A comprehensive reform for high schools that links college preparation courses and "career academies."

A. Accelerated Schools Project

Reform Program Features

The Accelerated Schools Project (ASP) is a process-oriented comprehensive school reform, involving the whole school staff (certified and non-certified), parents, students, and members of the community. The model was developed specifically for underperforming schools that serve youth in situations that put them at risk of failure or dropping out of school. To change the school culture, all stakeholders in the school come together in efforts to restructure the school based on three principles: unity of purpose, empowerment coupled with responsibility, and building on strengths. The model advocates using instructional techniques traditionally associated with gifted and talented instruction to provide accelerated rather than remediated learning. The ASP emphasizes providing all students with "powerful learning" experiences that translate into increased student learning outcomes.

The ASP model does not specify a curriculum or instructional method. Instead, the model focuses on professional development based on inquiry and reflective practice, along with structures and processes that take a focused approach to determining what changes work best for all of the students in the school. Thus, while process features should look similar for all Accelerated Schools, each school's reform activities will evolve uniquely. The reform features are depicted in Figure A.1.

Schoolwide Processes

Accelerated Schools requires school *Buy-In*. The model uses *Site-Based Management* for shared decision-making in the school. During the first year, a *Reform Team* is established that is representative of all stakeholders, and includes representation from each school study group (teams of teachers involved in taking stock). This team assists the on-site facilitator in providing support for program implementation, and serves as a transitional body for site-based management. After the school sets priorities, it establishes a governance system based on representation from each inquiry study team and each stakeholder group.

The first year of implementation of the ASP model involves two processes: *Taking Stock* and *Visioning*. Both the processes and the products of these features are important to the ASP model. The processes build community among stakeholders, and provide a deep knowledge base and consensus about the school. The products provide the direction for the reform activities of the school. Each process is conducted across a number of months and involves *Study Groups/Schools* with representatives of teachers, staff, students, and parents. During *Taking Stock*, the school designates specific research areas and forms study groups that are responsible for data collection, analysis, and reporting of results. In addition to the data collected in most *Taking Stock* efforts, the process encourages the use of surveys to assess how different groups experience the school, and to study all local standards to gain clear understanding of how students and schools are assessed by the district and state.

The ASP *Visioning* process includes gathering input from all stakeholders, synthesizing ideas, and formulating their "dream school." The process is intended to build empathy and understanding between stakeholder groups from which consensus is derived. The resulting *Vision* provides the school with *Instructional Guidance* and is used to direct reform activities.

By the end of the first school year, the school sets its reform priority areas by comparing the results from *Taking Stock* with the *Vision*. These priority areas become the focus of the schools' *Inquiry* conducted by school study groups, called cadres. The ASP Inquiry process involves studying the priority area, generating hypotheses about the challenges posed to the school, testing hypotheses, pilot testing proposed reform actions, assessing the results, and making recommendations on reform actions to the school. The *Inquiry* process often involves studying classrooms and student work, conducting stakeholder surveys, and exploring available resources. During the *Inquiry* process, the study group makes frequent reports to and receives feedback from the whole school.

At the end of each school year, the model requires an annual *Formative Program Evaluation,* which is used to refine the reform at the school. Schools use an ASP tool-kit to gather information across the school year that includes rubrics to assess implementation of the reform model and student performance data. Schools compare data to the initial *Taking Stock*, and *Vision*. Based on this comparison the school refines its reform including changing the focus of school study groups and/or refining the *Vision*. Thus, although the school is fully implementing the model once it begins the *Inquiry*, the reform is not complete. Instead, the school continues to engage in ongoing school improvement.

Implemented Theories/Philosophies

The Accelerated Schools Project's theories about learning are all related to the model's belief that all students benefit from teaching strategies used for the gifted and talented. The model advocates *Acceleration*, or enrichment strategies—as opposed to remediation methods—to ensure that students acquire the building-block skills that are required for more sophisticated work.

Central to all of the learning theories advocated by ASP is *Constructivist Learning*, characterized as "Powerful Learning." The ASP concept of Powerful Learning is rooted in cognitive psychology and is described as related to five instructional components that are linked to research: authentic, interactive, inclusive, learner-centered, and continuous. The focus on *Constructivist Learning* with *Student Empowerment* implies that the new methods of instruction will vary greatly from traditional lecture or workbook/skill review methods.

The model also promotes *Concept Development* to encourage the development of higher order thinking skills, and *Thematic Teaching* to increase the relevance of classroom instruction and strengthen the cognitive connections between subject areas. Consistent with *Constructivist Learning* and *Concept Development*, the model recommends reading approaches that are consistent with *Whole Language*.

The ASP model's theories of school reform center on *Teacher Professionalism* and *Reflective Practice*. The ASP model asserts that a school embodying the three principles, embracing the teaching philosophies, and engaged in inquiry and action researching, will be able to direct, implement, and sustain changes at the core level of the schools.

Professional Development Reform Features

The Accelerated Schools Project requires schools to designate a full- or part-time *On-Site Facilitator* to act as the Accelerated School's coach, and uses a *Training of Trainers* design to provide for school training in the reform process. One or two additional school personnel—often including an administrator—attend the certified training, then assist the *On-Site Facilitator* in training the school. To support the school in implementation of the model, each school has a *Certified Specialist* who visits the school at least three times a year. The specialist is affiliated with the Accelerated Schools Project through a regional mentoring center, which is most often located in a university but also may be affiliated with a state department of education.

At the beginning of the school year, *In-Service Workshops* and professional development days are used for training on the ASP process. Rather than conducting a complete training on all aspects of the process, the model provides for specific trainings to coincide with the implementation processes. Initial trainings include the philosophy of the model, Site-Based Management, *Taking Stock*, and *Visioning*. After the model is implemented, professional development is determined and conducted at the school level, and, where appropriate, is led by teachers from the school.

The emphasis of professional development through reflective practice is supported by collaboration among teachers, including inquiry focused on testing hypotheses in classrooms. Accelerated schools often dedicate additional time for grade-level or subject area *Teacher Collaboration*. Professional development is also supported through *Networking* opportunities that include regional and national conferences as well as "Powerful Learning Laboratories" held regionally. In recent years the model has begun to require schools to send teams to an annual Powerful Learning Laboratory that focuses on constructivist teaching methods and on using Powerful Learning to address local and state learning standards.

Parent/Community Involvement Reform Features

The model encourages strengthening parent-school connections, beginning with involving parents in the buy-in process. *Parent Awareness* about the school's implementation includes developing and implementing strategies for soliciting parent input during *Taking Stock* and *Visioning*, and for involving parents directly in these processes. Parent representatives are involved in the school governance first through *Parent Participation in Reform Team*, and later through *Parent Participation in Site-Based Management*. Parent participation on school study teams allows for direct and indirect *Parent Participation in Planning Curriculum*.

Participation of the larger community is generally through the solicitation of feedback during *Taking Stock* and *Visioning*. Additionally, *Taking Stock* study groups are encouraged to look to the community when compiling information about existing resources. Similarly, during *Inquiry* the greater community should be considered when addressing priority areas. In addition to formal participation in the school reform processes, many ASP schools encourage active parent participation related to classrooms through parent conferencing and using *Parent Volunteers*.

Systemic Outcomes

The ASP aims to accelerate the learning of all children. Its core philosophy advocates raising all children, including children with special needs, to grade level by the end of sixth grade. These reform program features should improve *Attainment/Equity* (reducing retention and special education referrals) and *Achievement* on standardized tests (passing rates and scores in math and reading). The impact of ASP on these outcomes depends largely on which classroom practices schools choose to pilot test and implement.

Reading/Language Arts Program Features

The ASP does not have a specific model for literacy instruction. The Accelerated Schools Project does not advocate any specific features. Instead, a process—carried out by school communities and shaped by Accelerated Schools Project principles—determines program features. Nonetheless, some features of Accelerated Schools suggest an approach to early reading and language education. To a large extent, evidence supporting these speculations can be found in some of the Accelerated Schools' research, in which descriptions provide some indication of which literacy-related features schools were using. Specific program features related to literacy programs within Accelerated Schools (Figure A.2) are described below.

Organizational/Structural Features

Accelerated Schools' organizational and structural features clearly reflect its purpose as a school reform model. Its purpose is schoolwide reform accomplished through a more enriched curriculum and instruction. For example, ASP teachers work together in planning and implementing curriculum, including content-rich *Thematic Units*. *Interactive Learning* is used to engage students and often includes the use of more *Small Group* activities, including cross-age and *Heterogeneous Groups*.

The model encourages the use of features to foster both interdependent and independent students. Thus, ASP schools often adopt features such as *Student-Initiated Learning Centers* and *Peer Tutoring*. Some studies also refer to the use of *Trade Books*, rather than "decodable" and/or basal books.

Classroom Instruction Features

The ASP model focuses on *Authentic Instruction* and *Collaborative Teams* to create relevant, high-interest learning experiences. Consistent with the focus on implementing more enriched teaching techniques, the model encourages the use of instructional features that emphasize student strengths, language development across subjects, problem-solving, and higher-order thinking skills such as *Inquiry Learning,* and *Project-Based Instruction*. The model also encourages developing language skills through *Creative Writing* along with other methods that emphasize that concepts should be taught in meaningful contexts, rather than abstractly. Some schools adopt the use of *Computer as a Tool, Interpreting/Discussion* and *Paired Reading* to develop meaning-centered reading skills.

ASP teachers incorporate reflective practice into the classroom through *Performance Assessment*. Teachers have the flexibility to adapt instruction based on these assessments.

Reading/Language Arts Outcomes

While there is no specific literacy approach denoted by the Accelerated Schools Project, the ASP is based on a strong inquiry model in which individual schools evaluate their own needs and make changes accordingly. Since every school has a unique community of students, teachers, and parents, Accelerated Schools frequently end up with unique reading and literacy programs. For this reason, the program in itself does not and cannot specifically target any of the literacy outcomes. In particular, the process of identifying and targeting reading and literacy outcomes is left up to the individual schools. Targeted literacy outcomes are based on each school's process of *Taking Stock, Visioning,* and *Inquiry*. Schools can use the ASP process to focus on the learning outcomes for reading and language arts—*Emergent Literacy*, *Decoding A (Context Free), Decoding B (Meaning Oriented), Comprehension*, *Composition*, and *Critical Literacy*—but emphasis on these outcomes remains optional according to the model design.

Math Program Features

While the ASP model does not prescribe a curriculum or specific instructional methods, the project's emphasis on concept development, acceleration, and constructivist learning characterizes an approach to math education (Figure A.3). Specific program features related to classroom practices in math are described below.

Organization/Structure

ASP considers schools as learning communities where instruction involves *Interactive Learning* and frequently includes *Small Groups* working toward a common goal. *Heterogeneous Groups* are encouraged, rather than ability grouping. Classes are organized around *Thematic Units*, which link students' early experiences and other subjects taught in the classroom. Some schools use *Student-Initiated Learning Centers*, and *Peer Tutoring* to foster empowerment and independence in learning.

Classroom Instruction

The ASP model does not require a specific math program based on the idea that that each school/teacher will develop its own techniques according to student needs, through powerful learning techniques and reflective practice. However the model does include some classroom instruction features related to powerful learning. *Authentic Instruction* and *Problem-Solving* activities provide a connection between the student's own world and classroom practices. The model's focus on acceleration and constructivist learning suggests the use of hands-on learning through *Manipulatives*, *Project-Based Instruction, Collaborative Teams*, and *Inquiry Learning*. ASP also includes the use of *Performance Assessment* to provide feedback to the teacher. Other features not required, but sometimes used by ASP schools include *Computer as a Tool, Interpreting/ Discussion/Math* and *Worksheets/Workbooks* to reinforce student learning.

Math Outcomes

The Accelerated Schools process focuses on accelerating achievement for all children, including and especially students who are in situations that put them at risk of failure. Thus, the ASP has an implied emphasis on developing strategies in schools that improve all math outcomes: *Numeracy, Basic Operations, Problem Solving, Mathematical Concepts,* and *Advanced Math.*

Figure A.1
Accelerated Schools Project:
Program Reform Features

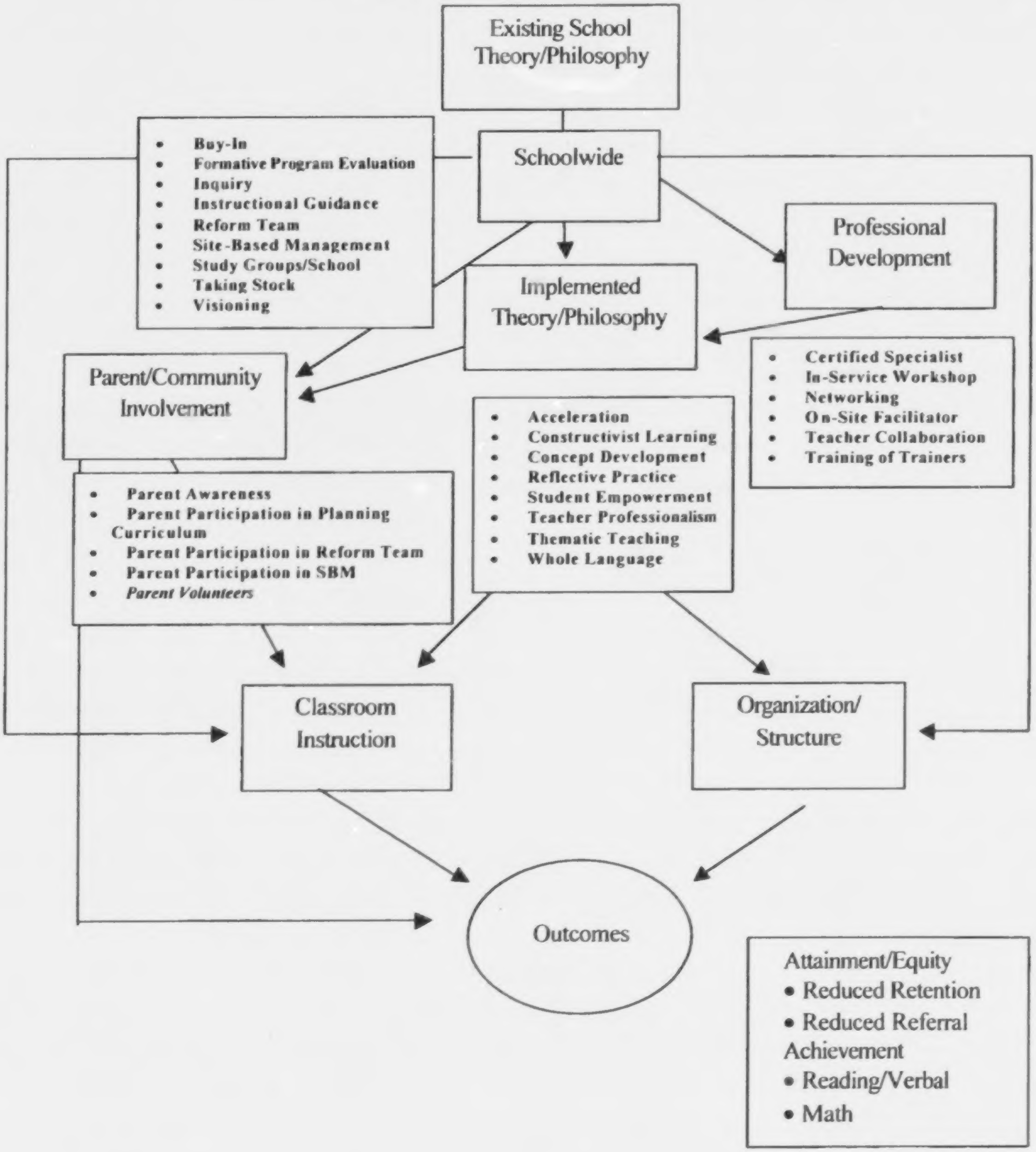

Existing School Theory/Philosophy
Schoolwide
Buy-In
Formative Program Evaluation
Inquiry
Instructional Guidance
Reform Team
Site-Based Management
Study Groups/School
Taking Stock
Visioning
Professional Development
Implemented Theory/Philosophy
Certified Specialist
In-Service Workshop
Networking
On-Site Facilitator
Teacher Collaboration
Training of Trainers
Parent/Community Involvement
Acceleration
Constructivist Learning
Concept Development
Reflective Practice
Student Empowerment
Teacher Professionalism
Thematic Teaching
Whole Language
Parent Awareness
Parent Participation in Planning Curriculum
Parent Participation in Reform Team
Parent Participation in SBM
Parent Volunteers
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referral
Achievement
Reading/Verbal
Math

Figure A.2
Accelerated Schools Project:
Reading/Language Arts Program Features

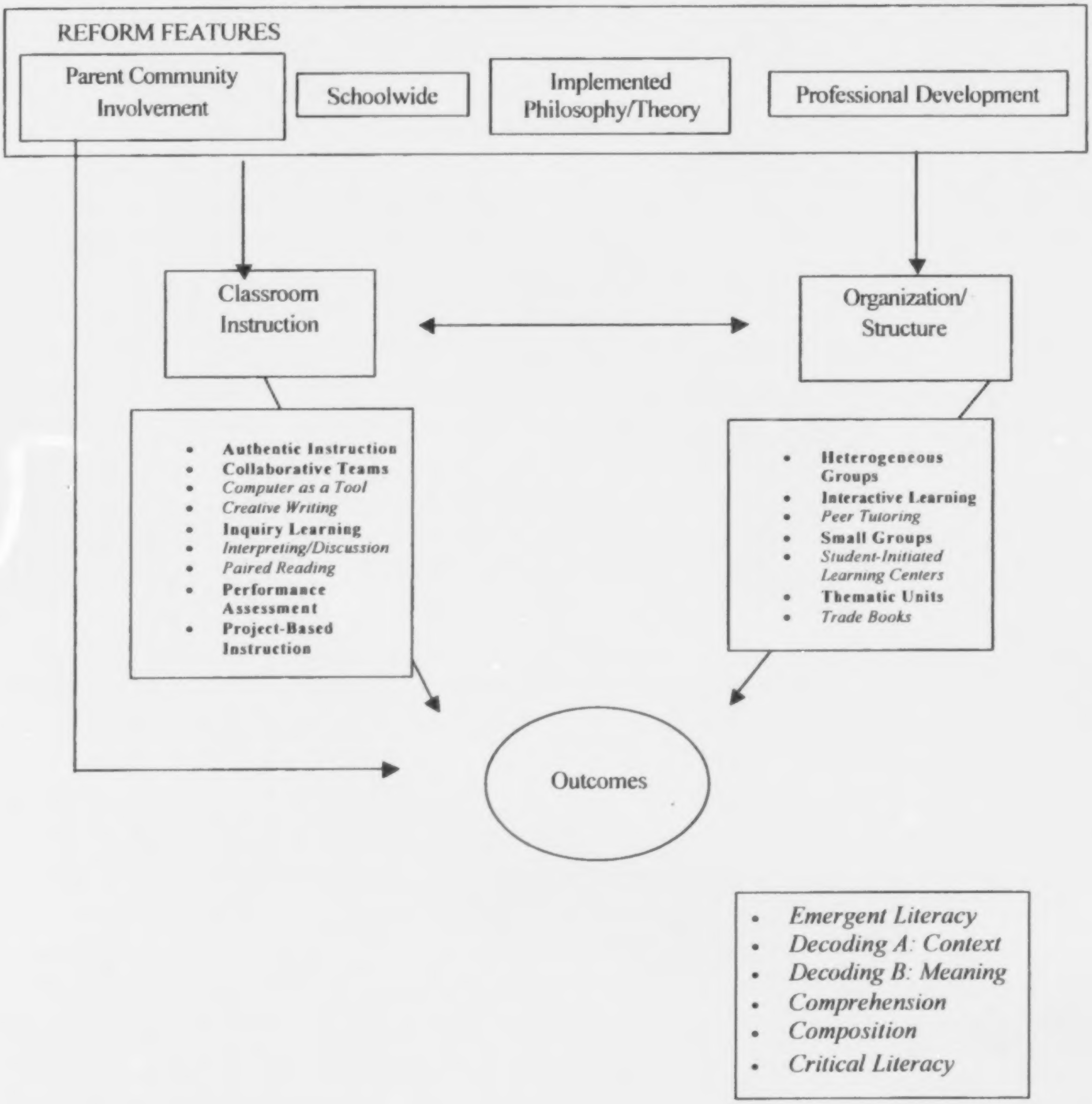
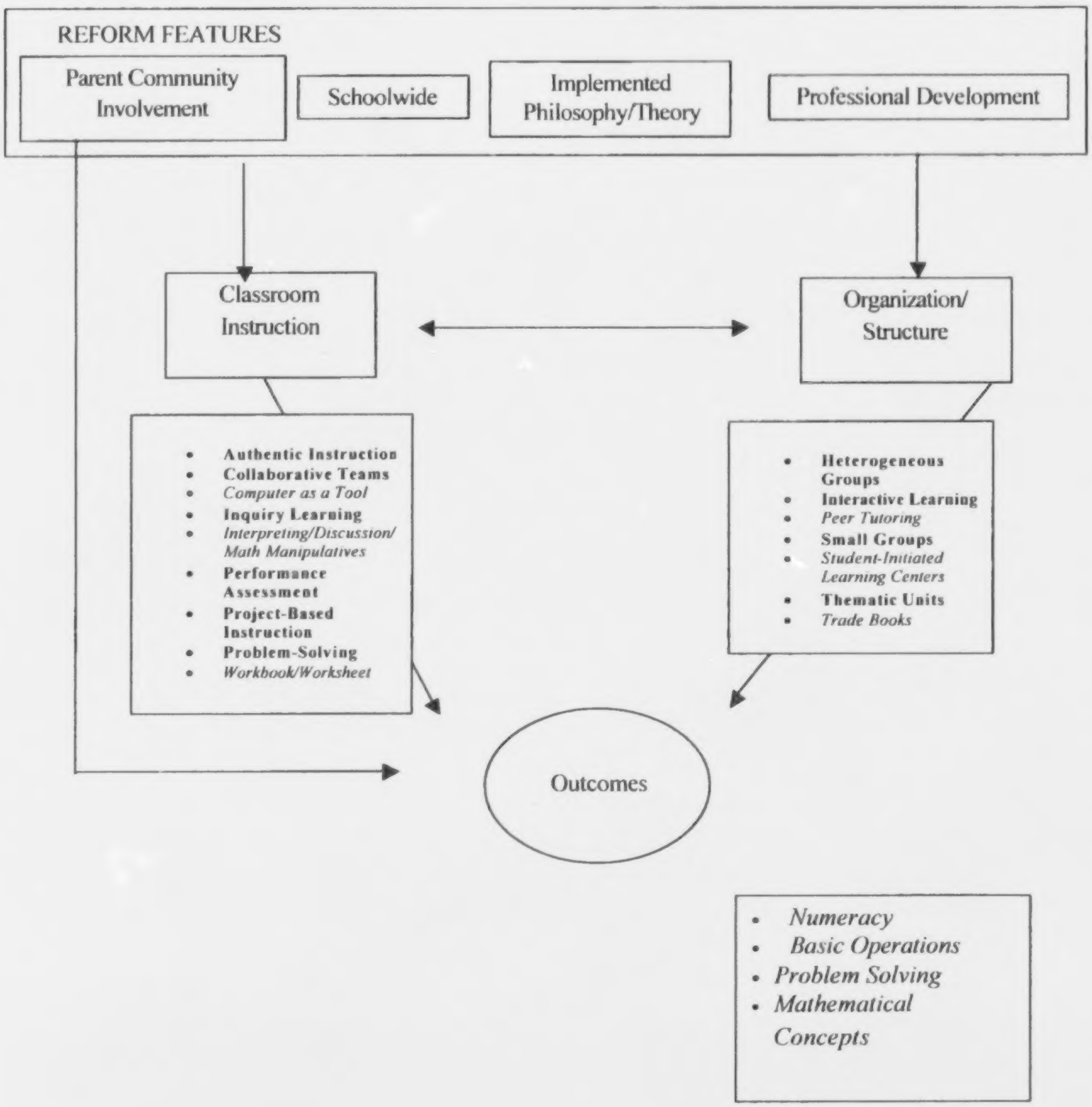

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Computer as a Tool
Creative Writing
Inquiry Learning
Interpreting/Discussion
Paired Reading
Performance Assessment
Project-Based Instruction
Heterogeneous Groups
Interactive Learning
Peer Tutoring
Small Groups
Student-Initiated Learning Centers
Thematic Units
Trade Books
Outcomes
Emergent Literacy
Decoding A: Context
Decoding B: Meaning
Comprehension
Composition
Critical Literacy

Figure A.3
Accelerated Schools Project:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Computer as a Tool
Inquiry Learning
Interpreting/Discussion/ Math Manipulatives
Performance Assessment
Project-Based Instruction
Problem-Solving
Workbook/Worksheet
Heterogeneous Groups
Interactive Learning
Peer Tutoring
Small Groups
Student-Initiated Learning Centers
Thematic Units
Trade Books
Outcomes
Numeracy
Basic Operations
Problem Solving
Mathematical Concepts

Accelerated Schools Project
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B. America's Choice

Reform Program Features

The America's Choice reform model, previously known as the National Alliance for Restructuring Education, is associated with the National Center on the Education and the Economy (NCEE) and was established in 1989. NCEE founded the New Standards project in 1991 to develop internationally benchmarked content and performance standards. The New Standards' Performance Standards were piloted in schools, as were related performance-based reference exams and professional development. The America's Choice design was developed based on New Standards work in schools and has been recognized by the New American Schools Development Corporation since 1992. The model addresses all levels of schools, although the kindergarten through eighth-grade model varies in design from the high school model.

The America's Choice reform model focuses on achieving high standards for all students. The model seeks to enable all students to be fluent readers by the end of third grade, competent readers and writers when entering middle school, prepared for algebra by the beginning of eighth grade, and prepared to complete college-level work by high school graduation. To reach these goals, the model blends prescription with process. Prescriptive aspects include a set of standards and reference exams that organize and lay out a specific curriculum. The model provides sets of core assignments based on the standards. The process aspect includes the training of teachers to develop standards-based instruction for those parts of the curriculum that are not prescribed. The program features included in the America's Choice reform model (Figure B.1) are summarized below.

Schoolwide Processes

The America's Choice model requires a one-year exploration and *Buy-In* process prior to implementation. After deciding to adopt the model, the school is required to create and fill several positions with people who will serve as on-site facilitators in the process (see Professional Development). This group serves as the *Reform Team* and plans and facilitates the implementation of the model at the school.

The model includes a *Taking Stock* initiative in which the school collects and analyzes student performance data, which provides baseline information to the school. The *Taking Stock* process serves as a starting point for studying the New Standards providing *Study Groups/Teacher* referent points of current student performance to compare to the work required to achieve the standards. Throughout implementation of the model, teacher study groups are used to focus on issues related to teaching and learning (see Professional Development and Implemented Theory/Philosophy). *Formative Program Evaluation* occurs annually as part of a process to adapt the reform in the coming year to enable students to meet the standards.

Two program features are related to the New Standards' Performance Standards and how they guide the activities of the reform. First, the standards themselves act as *Instructional Guidance,* which shapes the type of professional development sought by the school and focuses on the reflection activities and study of teaching practice. Second, the standards organize the curriculum and the instruction at the school, providing *Systematic Learning* that is articulated throughout the grade levels and across subject areas within the school. America's Choice provides core assignments based on the standards, and provides teachers with training to support teachers in the development of supplemental standards-based units with embedded performance assessments.

America's Choice reconfigures several structures of the school to foster a closer knit learning community within the classroom and within the school, where students and teachers work closely together toward achievement of the standards. *Looping* at the elementary level keeps the classroom teacher and class together through two or more grades. This both increases the teachers' knowledge of the strengths and areas of needs of the students, and strengthens caring relationships between students and between the teacher and the students. In the middle and high schools, *School-Within-a-School* configurations are used. The same students attend the same classes and share the same teachers in groups of two- to four-hundred students. The model recommends each school have its own separate faculty and head teacher, and operate with some independence. The high school is divided into *Upper/Lower Divisions* with the lower division focusing on the college preparatory core curriculum and the upper division broken into various *Specialized Courses of Study*, which may include an International Baccalaureate Program, Advanced Placement courses, or an academic Career Academy. America's Choice also provides for a dropout recovery program for students needing alternative methods of scheduling.

The community is often involved through *Community Partnerships* intended to find ways to strengthen the links between success in school and success in the larger community. Examples of such partnerships include business collaborations in the development of career academies, and community recognition of the value of diplomas earned, due to the rigorous curriculum, through employment or scholarship opportunities.

Implemented Theory/Philosophy

The America's Choice model places emphasis on two primary areas of learning theory. The first is *Acceleration*, which emphasizes enrichment activities rather than remediation to bring students up to grade level in basic skills. This includes supplemental learning features and the *Double Periods* of math and English classes (see organizational/instructional). *Concept Development* is key to this model, placing greater instructional emphasis on conceptual learning with embedded "facts/content." The Performance Standards used by America's Choice build upon the standards developed by the national professional organizations in each discipline, including the highly conceptually organized NCTM standards. The model also emphasizes *Thematic Teaching* as a means of improving relevancy and applied learning standards. Finally, the America's Choice early reading and writing program is based in both *Phonological Awareness* and *Whole Language* learning theories.

The America's Choice model is rooted in several theories of reform. Primary to the design is *Standards-Based Instruction*, as demonstrated by the central role of the New Standards in the reform design. Other theories relate to building teacher and school capacity to implement and design instructional programs that lead to student achievement of those standards. The model at all levels includes some *Prescribed Curriculum* in the form of core assignments that cover a large portion of the curriculum. Teachers are trained in designing standards-based instructional units, and design these to complete the curriculum. Rather than prescribe methods, the model encourages *Reflective Practice*, in which teachers study the model's methods, seek professional development in new methods, and work collaboratively to find effective instructional practices to deliver the curriculum.

Professional Development Reform Features

In America's Choice, *Certified Specialists* work with *On-Site Facilitators,* one of whom is a literacy coordinator. The model uses a *Training of Trainers* method to train the school in the reform process. *In-Service Workshops* and *Networking* are two other ways that America's Choice sites continually help the school implement the model. The model requires extensive professional development. The school determines its professional development needs, in terms of teaching methods designated by the teachers as appropriate for implementing the standards-based instruction.

Professional development also is fostered through reflective practice and *Teacher Collaboration*. Opportunities for collaboration are provided in weekly grade-level and subject-area meetings in which teachers focus on methods, planning, and student work. Teachers keep *Teacher Inquiry/Portfolios* of their best lessons to share with other teachers.

The facilitators are key during the adaptation and implementation process of the design. Various schoolwide work sessions are required by the model, including an annual session using student performance data to strategize and plan for the year with an eye toward having students meet the standards and succeed on the reference exams. Additional support is given to the school through national conferences (which at least three people are required to attend, including the principal), provide *Networking* among schools and districts implementing the program.

Parent/Community Involvement Reform Features

Parent involvement also is emphasized in the America's Choice model. Families are kept informed about the model and the student's success at school through parent conferences and *Parent Awareness* activities. *Parent Communication* is ongoing and is established through a notebook the student carries between home and school daily, in which both parents and teachers write notes, questions, and observations about the student's progress.

America's Choice requires students to read at least twenty-five books a year as a part of the reading/language arts program. Parents may be involved in this effort in several ways. In the younger grades, *Paired Reading* may be expected at home. *Learning Contracts/Parent* also may be expected in the form of a home-reading record.

Systemic Outcomes

America's Choice is a schoolwide reform that combines an emphasis on learning standards, an aligned curriculum, and professional practices that enable teachers to address local issues. These systemic changes logically link to both improvements in *Attainment/Equity* (reduction in retentions and referrals, if not increased graduate rates [for high schools]) and

Achievement (math and reading/verbal tests). Additionally, America's Choice covers all grade levels, which means it can be implemented in virtually all types of schools. However, this reform currently lacks a confirmatory research base.

Reading/Language Arts Program Features

America's Choice was designed to help all students achieve internationally benchmarked standards in English. The model serves children in kindergarten to teenagers in high school. One of the main tenants of the English program is that by the end of the third grade, all students will be fluent readers. America's Choice is concerned with thwarting student failure through acceleration rather than remediation. Early recognition of failing students and intervention (through extra instruction) are important parts of this model. This early detection is apparent in ninth grade, where students who fall behind are given a double dose of English courses so that they will be prepared for high school work. The reading/language education program features (Figure B.2) are summarized below.

Organizational/Structural Features

America's Choice's goal is on students achieving the set forth standards and *Diagnostic Procedures*. Students initially are given a referent exam based on the standards, which guides the designation of students needing additional help and considers the whole student body's results and the reform efforts of the school. Additionally, *Ongoing Written Observations, Frequent Assessments, and Cross-Year Portfolios* are used to monitor student progress. Should a student fall behind, *Supplemental Learning* becomes important. This is especially important through third grade and in the ninth grade. Because one of the main goals of America's Choice is to make sure that all children can read fluently by third grade, the K-3 years are emphasized with a specific literacy program. In addition, ninth grade becomes another important benchmark for reading. Should a student not meet reading requirements, she or he is given a *Double Block* of English upon entering high school.

The program emphasizes a *Literacy Rich Environment* including the use of *Trade Books* and bridged into other subject areas through *Thematic Units*. *Small Groups, Peer Tutoring,* and *One-on-One Tutoring* are used to ensure student success. *Supplemental Learning* is provided as needed after school, in Saturday school, and in summer school.

Classroom Instructional Features

Assessment is viewed as a crucial process in achieving successful standards-based instruction. Thus, *Performance Assessments* are used in America's Choice to guide instructional methods. The model emphasizes *Authentic Instruction* for its students to increase relevancy of learning. In addition, *Computer as a Tool, Collaborative Teams,* and *Project-Based Instruction* are used to provide concept-rich, interactive instruction.

Literacy is emphasized in America's Choice. As with many reforms, America's Choice schools may use *Worksheets/Workbooks* within the classroom to emphasize important aspects of instruction. In this reform model, writing and reading are equally important. In both areas, *Meaning Context/Predicting* is an important tool to understanding language. In the lower levels, *Writing Mechanics* help students learn about written expression, while in the upper levels, *Advanced Writing Mechanics* become key to this understanding. In the lower levels, *Learning Contracts/Student* is used and students may be required to complete a home-reading record (or journal of books read) that is passed between the parent and teacher.

America's Choice reading program emphasizes developing reading and writing skills simultaneously, and often encourages choice in terms of selecting topics and themes of interest to the student. Accordingly schools use *Essays, Journals, Trade Books* and *Self-Selected Reading*.

Reading/Language Arts Outcomes

Although the America's Choice program is based on internationally benchmarked standards, the instruction can take many forms based on the school in which it is implemented. It is therefore impossible to link specific outcomes based on instructional features explicit to the model, as it is in more prescribed models. However, at the heart of America's Choice is that every child becomes a fluent reader by the third grade. This model expects that elementary- and middle-school programs could promote *Emergent Literacy, Decoding A (Context Free), Decoding B (Meaning Oriented), Comprehension, Composition,* and *Critical Literacy.*

In addition, America's Choice strives to create learners that have both the reading and writing abilities necessary to be successful in college upon high school graduation. The model's use of high-level standards linked with assessment suggests *Critical Literacy* (reading critically across the curriculum). The high school version of the reform should enhance learning of *Advanced Language Arts.*

Math Program Features

America's Choice provides a standards-based curriculum that focuses on basic mathematics, mastery of mathematical concepts, and application of those concepts. The program focuses on college- and work-readiness at the high school level. It focuses on building learning environments that link schools with the community by involving the public in the process of education. The math and education program features included in the America's Choice reform model (Figure B.3) are summarized below.

Organizational Structural Features

America's Choice restructures the school, the classroom, and classroom management. Features are established to provide support for students needing assistance such as *Peer Tutoring* and *One-on-One Tutoring* during *Supplemental Learning* sessions. Across classrooms, teachers are encouraged to use *Thematic Units* to tie together topics in several disciplines and to encourage collaboration among students through *Small Groups*. Within classrooms, students' performance and learning are assessed through *Diagnostic Procedures*, *Cross-Year Portfolios*, and *Ongoing Written Observations*. This provides the teacher with the opportunity to quickly identify students who are falling behind and take precautions toward their acceleration to meet the standards.

To increase students' readiness for college, the program emphasizes *Double Periods* of math during ninth grade for students needing extra help. High school is divided into *Upper/Lower Divisions.* While lower-division students focus on core curriculum, upper-division students focus on only one of the programs. Schools can choose a program emphasizing science and technology, the humanities, the arts, or a foreign language. They may also choose to implement Advanced Placement and/or International Baccalaureate programs. The design does not provide the aforementioned programs, but supports their implementation and requires the use of the New Standards as part of each program. However, it does provide direct services for establishing Career Academy Institutes and the Center for Independent Studies as alternatives for students to fulfill their high school requirements.

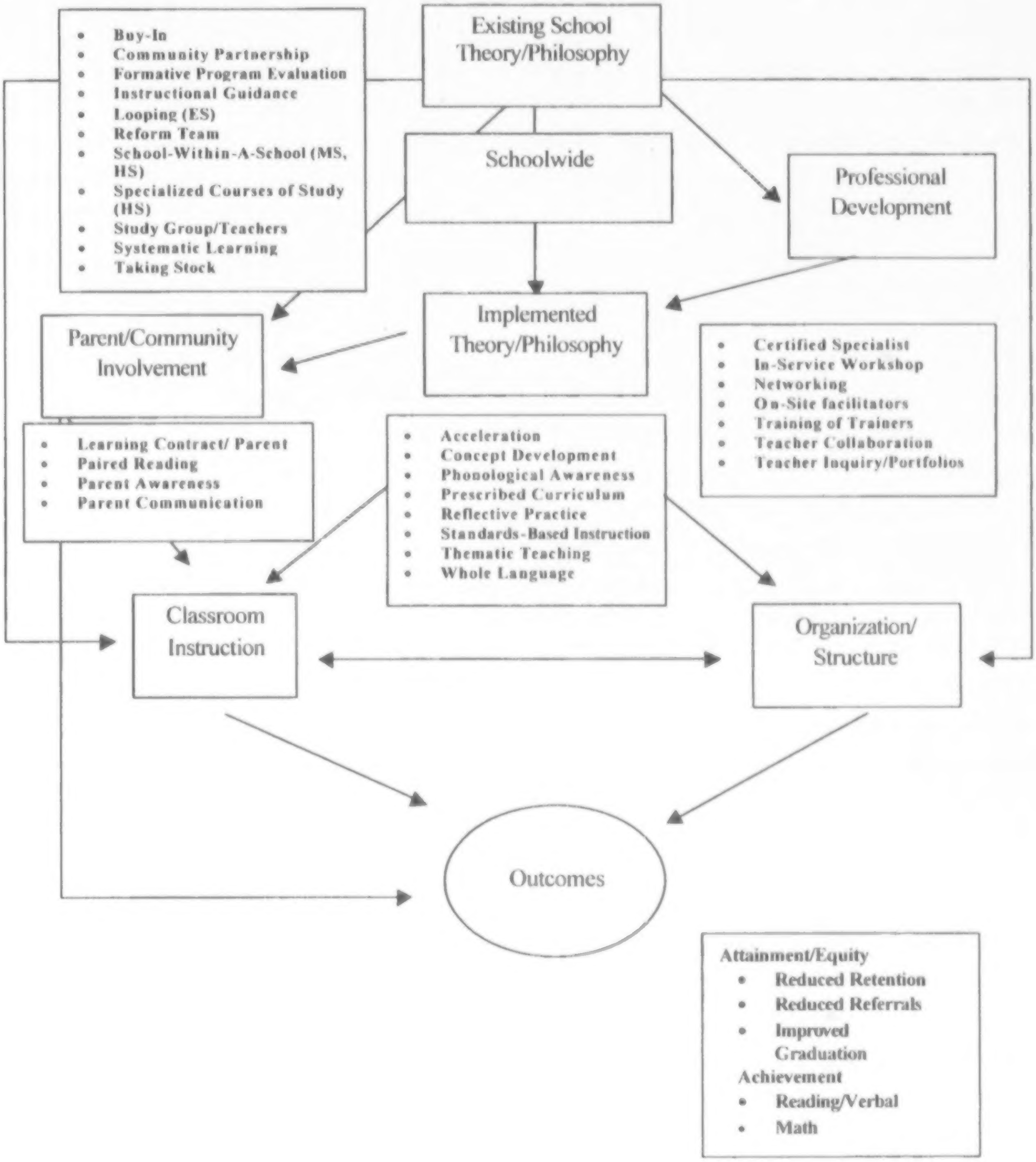
Classroom/Instruction Features

The design encourages *Authentic Instruction* and *Project-Based Instruction* through *Worksheets/Workbooks* and comprehensive projects that are done every year. *Computer as a Tool* is used to develop math concepts, and the importance of basic skill-building in a world of technology is emphasized. *Problem-Solving* is emphasized during individual activities or in *Collaborative Teams.* Students communicate with one another and explain math concepts to gain fluency in math. Teachers develop their own instructional methods and supplemental curricular materials for class instruction according to the standards and the core assignments provided by the model. Teachers use *Performance Assessments* to inform their selection of instructional methods.

Math Outcomes

Because America's Choice has an explicit emphasis on national standards in math, this reform has specific links to all math outcomes, *Numeracy* through *Advanced Math.* However, since the curriculum is still under development, these links will be strengthened in the future.

Figure B.1
America's Choice:
Program Reform Features



Existing School Theory/Philosophy
Buy-In
Community Partnership
Formative Program Evaluation
Instructional Guidance
Looping (ES)
Reform Team
School-Within-A-School (MS, HS)
Specialized Courses of Study (HS)
Study Group/Teachers
Systematic Learning
Taking Stock
Schoolwide
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
Certified Specialist
In-Service Workshop
Networking
On-Site facilitators
Training of Trainers
Teacher Collaboration
Teacher Inquiry/Portfolios
Learning Contract/ Parent
Paired Reading
Parent Awareness
Parent Communication
Acceleration
Concept Development
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Prescribed Curriculum
Reflective Practice
Standards-Based Instruction
Thematic Teaching
Whole Language
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referrals
Improved Graduation
Achievement
Reading/Verbal
Math

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Figure B.2
America's Choice:
Reading/Language Arts Program Features

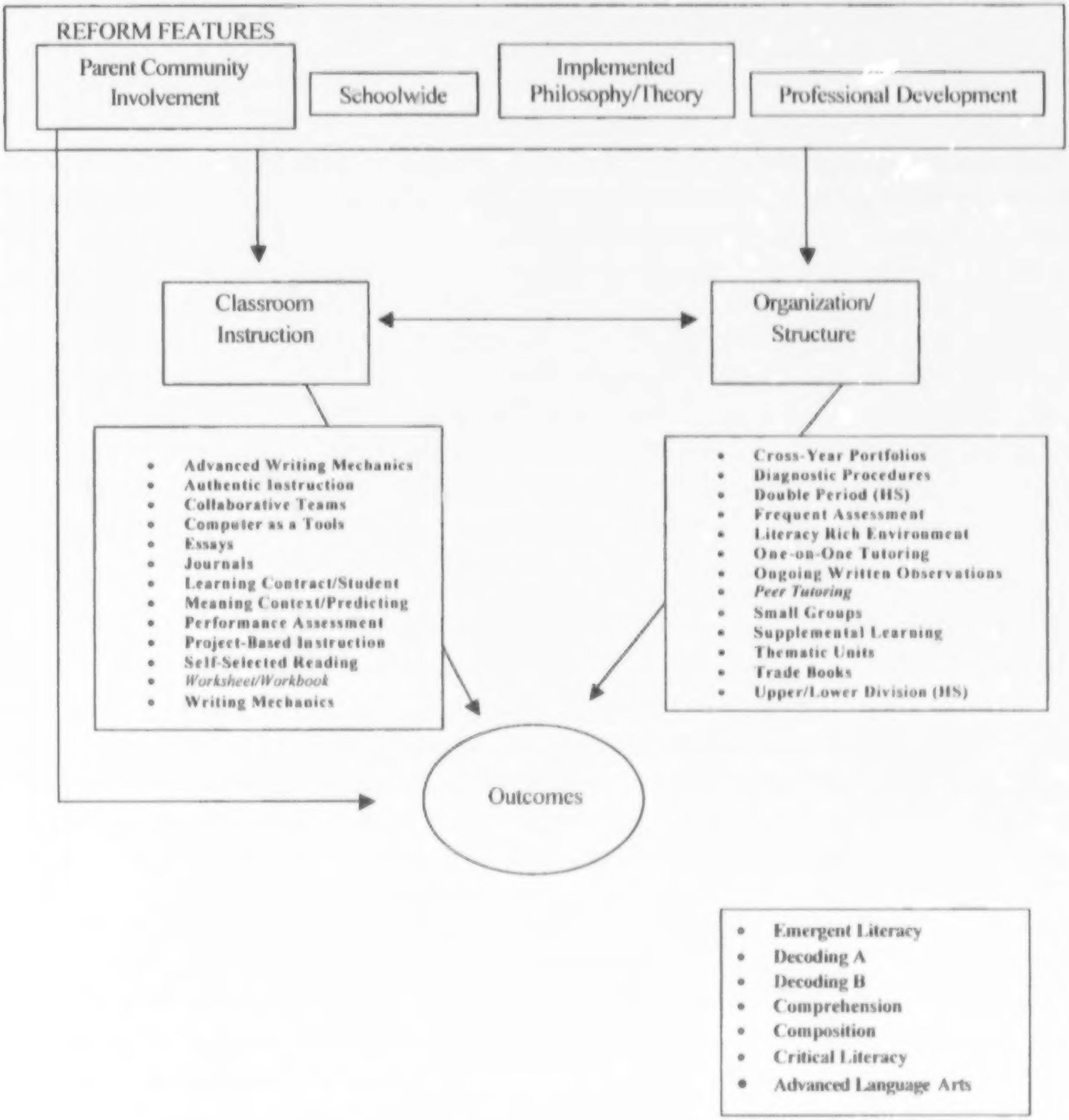
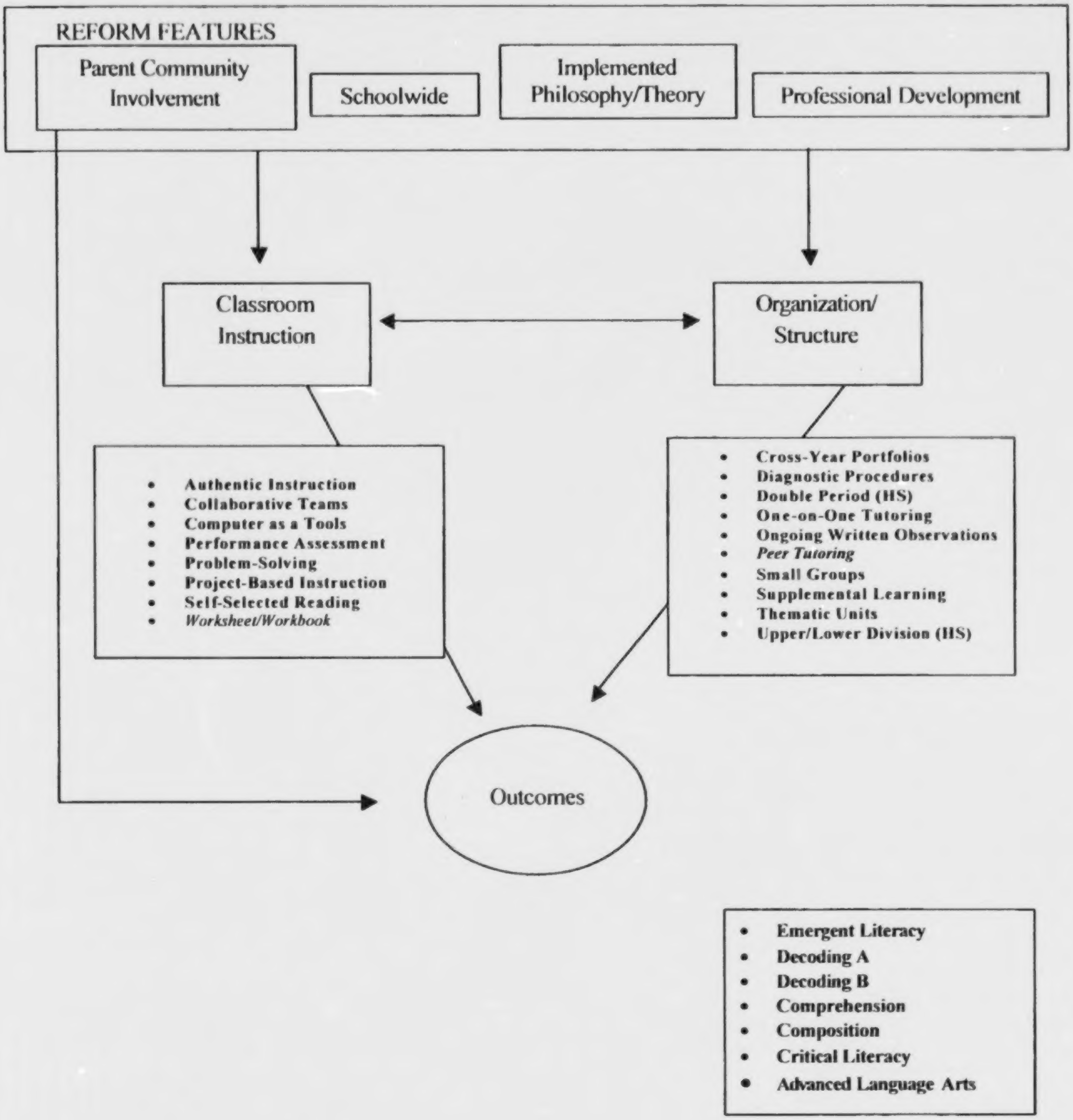

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Advanced Writing Mechanics
Authentic Instruction
Collaborative Teams
Computer as a Tools
Essays
Journals
Learning Contract/Student
Meaning Context/Predicting
Performance Assessment
Project-Based Instruction
Self-Selected Reading
Worksheet/Workbook
Writing Mechanics
Cross-Year Portfolios
Diagnostic Procedures
Double Period (HS)
Frequent Assessment
Literacy Rich Environment
One-on-One Tutoring
Ongoing Written Observations
Peer Tutoring
Small Groups
Supplemental Learning
Thematic Units
Trade Books
Upper/Lower Division (HS)
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension
Composition
Critical Literacy
Advanced Language Arts

Figure B.3
America's Choice:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Computer as a Tools
Performance Assessment
Problem-Solving
Project-Based Instruction
Self-Selected Reading
Worksheet/Workbook
Cross-Year Portfolios
Diagnostic Procedures
Double Period (HS)
One-on-One Tutoring
Ongoing Written Observations
Peer Tutoring
Small Groups
Supplemental Learning
Thematic Units
Upper/Lower Division (HS)
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension
Composition
Critical Literacy
Advanced Language Arts

America's Choice
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C. ATLAS Communities

Reform Program Features

The ATLAS (Authentic Teaching, Learning and Assessment for all Students) Communities is a process-oriented school reform model designed as a collaboration between four school reform organizations: The Coalition for Essential Schools, the School Development Program, Harvard Project Zero, and the Education Development Center.[4] The ATLAS design places emphases on two areas: 1) the development of an educational pathway of schools from elementary through high school that work in conjunction with one another to articulate standards, assessments, and educational reform efforts across the pathway of schools; and 2) changing classroom practices with an emphasis on "Teaching for Understanding"—focusing on fewer topics in much greater depth—and the use of constructivist teaching methods and authentic, performance-based assessment.

The model promotes building teachers' capacities for implementing classroom innovations through professional development supported primarily through *Study Group/Teachers*, teacher collaboration and reflective practice. The model also posits that to be successful, this reform is necessary to create the organizational structures within schools and the pathway. The model requires *Site-Based Management*, emphasizes district coordination (to support K-12 pathway), and encourages schools to involve the greater school community in the reform process. The ATLAS design is firmly rooted in teacher professionalism, asserting that for change to be meaningful and sustainable, it must be designed and implemented by the school itself.

The ATLAS model is ambitious in scope. For each of the many reform activities, the ATLAS model asserts that schools are responsible for charting their own path (e.g., schools design their own system of assessments and instruction rather than adopting a prescribed curriculum). This is a time-intensive process. A lengthy timeline is expected for schools to fully implement the model (typically three years). The model also strives for a balance between an externally designed model for reform, and an internally (at the school) designed path and set of reform activities. It allows some flexibility in the implementation of the model including the sequence and shape of some of the reform activities. Because of this flexibility, it is less clear than with some of the other process-oriented models which program components are required versus which are recommended parts of the reform process. The reform features are depicted in Figure C-1.

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[4] The Coalition of Essentials Schools (CES) advocates authentic teaching/learning focusing on the depth—rather than the breadth—of knowledge. CES promotes professional development through action research and reflective practice. The School Development Program (See Section II H) focuses on child development and on involving the community in the development of a school climate conducive to academic success. Harvard Project Zero focuses on applying multiple-intelligence theory to schools through authentic assessment and teaching. The Education Development Center develops innovative curriculum and professional development that emphasize inquiry and project-based learning.

Schoolwide Processes

Before agreeing to work with a school, the ATLAS design team requires a commitment from the school district to provide support to the school in its reform efforts, including providing a district employee to serve as an ATLAS liaison. This person works with each of the pathway schools, as well as a committee of representatives from each of the schools that serves to coordinate the reform efforts of each pathway school. In addition, the district agrees to devolve a specific degree of autonomy to the school with regards to decision making in areas such as resource allocation and staffing, in order to give the school more latitude in developing, implementing, and evaluating various reform efforts. The schools, in turn, agree to use a form of participatory *Site-Based Management*.

Each ATLAS school establishes a *Site-Based Management* body called a School Planning and Management Team (SPMT), which is composed of representative teachers and administrators. Some schools include parent and community representatives on the SPMT. The SPMT facilitates the reform activities conducted by *Study Group/Teachers,* and, along with the ATLAS coordinators, guides the school through the ATLAS implementation process. In addition to the SPMT, the model requires the establishment of a representative group for the entire pathway of schools. Representatives from each ATLAS pathway school work together to coordinate reform activities and to extend the curriculum and assessment activities so that each are articulated from K-12 across the entire pathway.

The ATLAS model requires several schoolwide processes, though not in a specific sequential order or dictated form, for which the study group/teachers are responsible. The roles of the study groups vary depending on the task, but most often they work in one of the following capacities: to conduct and analyze research, to develop "solutions" to address issues identified through research, to develop learning standards and aligned assessments, and to provide all teachers with ongoing professional development through collaborative action research and reflective practice. In each of the following schoolwide components, study groups/teachers meet together regularly to conduct the work.

ATLAS schools *Take Stock* to gather information on the school (performance as well as resources) and use ongoing *Formative Program Evaluation* to guide the reform. The school analyzes the information to determine areas to be addressed by study groups. These activities reflect key aspects of the reform, which is true for student learning as well for the reform process itself. The model asserts that assessment is vital to guiding learning (and reform), that data needs to be continually gathered and reviewed in order to adjust teaching (and reform efforts), and that multiple sources of authentic data should be sought in order to give the teacher (or school) more accurate information to guide the decisions about teaching (and the reform activities).

The ATLAS school establishes *Instructional Guidance* through the development of learning standards and assessments. Clearly articulated goals are considered essential for successful student achievement. Development of authentic assessment tools is directly aligned with the standards. Both the standards and the assessments are to be consistent with the view of "Teaching for Understanding." *Study Groups/Teachers* conduct research, analyze student work, and collaborate to develop these materials. In addition, the entire pathway of schools works together to ensure that the standards and assessment are well articulated across the K-12 pathway.

The model encourages schools to develop ways of involving the community in the school. Increased parent participation is also valued. Thus, many ATLAS schools will establish a *Parent/Community Group.*

Implemented Theories/Philosophies

The ATLAS model's theories of learning are rooted in the ideas of "Teaching for Understanding," and promote both *Concept Development* and *Constructivist Learning.* Rooted in *Concept Development* is an approach centering on teaching that focuses on understanding and uses higher-order thinking skills as a means for acquiring knowledge. This approach emphasizes the ability to use knowledge (or facts) in complex tasks that demonstrate both concrete and abstract comprehension over the ability to recite and retain those facts as an instructional end. The model views the learning process itself as *Constructivist Learning*—in which new learning is constructed by building cognitive connections between a student's existing understanding and the new information in an interactive process.

The model promotes creating a balance between two potentially conflicting learning theories/approaches: *Child-Centered/Developmental* and *Standards Based Instruction.* With the first, *Child-Centered/Developmental*, attention is given both at the classroom and the schoolwide level to the developmental appropriateness of instruction and methods and to individual students' development. This suggests allowing flexibility both at the classroom level (allowing differences in how teachers teach specific materials based on the individual class) and at the student level (allowing some degree of individualization of instruction for students). The second theory, *Standards-Based Instruction*, places an emphasis on establishing very clear learning objectives and designing both instruction and assessments that are directly related to those standards. Thus, while the model suggests a key role for standards, implying that all students are to meet those standards, it also asserts that students may reach those same standards on slightly different paths.

The ATLAS model is rooted in *Teacher Professionalism,* based on the belief that those reform actions taken by the school—that are developed at the school—will be implemented with greater investment and willingness to change and challenge traditional beliefs and practices at the school. The model adheres to this so strongly that some leverage in applying the model to the school is given away from the model's designers and to the school. The model also subscribes to *Reflective Practice* as a primary model of improving teaching and sustaining professional development. Change in instructional practice is assumed to happen, not as a result of a professional development activity, (although many such activities may provide an impetus or a starting point for change), but instead through ongoing discussions about practice, study of student and teacher work, and collaborative planning and teaching.

Professional Development Reform Features

The ATLAS model initially trains the school through a *School-Site Training.* Both the initial training and all aspects of program implementation are supported by a *Certified Specialist* and a district-appointed *On-Site Facilitator. In-Service Workshops* are used to provide additional training. In addition, the model promotes continued training and growth in understanding the model through a coordinated set of site visits that connect new schools (those beginning implementation of the model) to more mature ATLAS schools. The "new school" sends several teams of teachers to the mature school for observations and discussions about the ATLAS model and methods.

The ATLAS model provides additional professional development through various *Networking* opportunities, including several in-depth training institutes for teachers and administrators. These institutes mirror a training-of-trainers method in which those who attend are expected to provide formal and informal training to the rest of the faculty.

The model places a great deal of emphasis on the role of *Study Group/Teachers* in professional development. Professional development is seen to be more meaningful when pursued because it has been identified as meeting a perceived need by the school, rather than being externally prescribed (e.g., a district mandate on science education). The study groups identify needs, research options, and propose them to the SPMT. In addition to selecting professional development for the school, the study groups are considered to be a primary vehicle for sustaining professional development through *Teacher Collaboration* and action research conducted through *Teacher Inquiry Portfolios* and sometimes through *Peer Review/Observation.*

Parent/Community Involvement Reform Features

Parent involvement in the ATLAS reform efforts is valued at all levels and phases of the reform. The model posits that the reform process should involve the greater community and, specifically, that it should engage parents in order to create a cohesive community effort to improve the students' educational outcomes. The model encourages schools to reach out, but leaves the specifics of how to do so up to the school. It does promote several specific features. *Parent Awareness* efforts are made to inform parents of the school's activities. *Parent Participation in Site Based Management* is encouraged through parent representatives. Parent conferences are used as points to bring parents more actively into their children's education.

ATLAS also promotes a proactive role of the school in meeting the needs of children, which sometimes includes areas beyond the traditional scope of schools. As such, both *Health Care Assistance* and *Support Services* may be implemented by ATLAS schools.

Systemic Outcomes

The ATLAS Communities program provides structure and reform activities to create an articulated educational program from K-12 across a pathway of ATLAS schools, supported by policies and programs at the school and district level, to improve student outcomes. The emphasis on using clear standards and frequent and aligned assessments to guide instructional efforts provides a logical link to improvement in *Attainment/Equity* (reduction in referral and retention, if not increased graduation rates) and *Achievement* (math and reading/verbal tests) outcomes. The reform process gives schools flexibility and latitude in the implementation of the model, which suggests that these outcomes depend upon the reform actions determined by the school. While the model's early reports suggest positive outcomes, at this time the reform lacks a confirmatory research base.

Reading/Language Arts Program Features

ATLAS Communities is a process-oriented reform model that focuses on schools creating their own solutions to literacy, developing strong language arts skills through action research, developing and linking learning standards and assessments, and incorporating teaching methods consistent with "Teaching for Understanding." The schools use local and state standards as a part of this process. ATLAS is also concerned with creating a community of involved teachers, administrators, and parents to develop strategies to help children learn to read. The model relies upon reflective practice and teacher research as means of improving the teaching of reading and, thus, student reading outcomes. ATLAS program features related to classroom practices in reading/language arts are depicted in Figure C.2.

Organizational/Structural Features

Because ATLAS is a process-oriented model, organizational/structural features are not prevalent. Assessment is central. Both *Diagnostic Procedures* and *Frequent Assessment* are essential in the classroom. Portfolios are another way that children's learning is assessed and demonstrated, and the strong emphasis on the use of portfolios suggests that *Cross-Year Portfolios* are likely to be used in ATLAS schools. Depending on the school and the decisions that it makes as it implements ATLAS, several other features may be a part of the program based on their consistency with both the model's implemented theories and with Teaching for

Understanding methods. These include, but are not limited to, *Interactive Learning, Thematic Units, Individualized Instruction, Heterogeneous Grouping*, and *Small Groups.*

ATLAS schools are encouraged to consider programmatic means of addressing the needs of students who are struggling to meet academic standards. Accordingly, some ATLAS schools may adopt one or more of the following strategies: *Supplemental Learning, Double Periods* of English, and *Peer Tutoring.*

Classroom Instructional Features

As stated earlier, ATLAS is process-oriented and, thus, although a type of teaching is suggested through the focus on Teaching for Understanding, it is not prescribed. However, several methods associated with reading instruction are important to the model. *Authentic Instruction, Inquiry Learning* and *Project-Based Instruction* are related to creating meaning-oriented instruction. In addition, *Performance Assessment* helps measure a child's success in the classroom, and suggests areas of emphasis to the teacher. Other features that fit well with the philosophy of the model and that may be present in a particular school's implementation are *Interpreting Discussion, Scaffolding* and *Collaborative Teams.*

Reading/Language Arts Outcomes

Because the ATLAS model is process-oriented, each school's implementation of the model emerges differently and is unique to that school. Therefore, the links to specific reading outcomes are weak. However, several aspects of the model suggest there is such a linkage. First, the model requires schools to establish clear learning standards and assessments to guide the instructional program of the school—and the schools incorporate local and state standards as a part of this process. Thus, the resulting curricular program will be associated with those local standards. To the extent that local standards emphasize literacy outcome (e.g. emergent literacy, Decoding A, and so forth), this reform model will link to the reading/language arts outcomes. Second, the creation of a caring community of adults who are committed to each child's education can be highly effective in mobilizing resources and efforts in order to create effective readers.

Math Program Features

The ATLAS model assumes that all children can succeed when provided with an educational "pathway," a coherent educational program from kindergarten through high school graduation. The pathway both allows for a rigorous, coherent, and in-depth educational program, and, with a reliance on methods consistent with authentic instruction and assessment, a program that is able to consider and address the difference in student learning styles and needs. The model approaches math instruction with a focus on "Seeing and Thinking Mathematically." This is a conceptually driven focus that provides teachers with flexible resources and reflects students' interests. The model for the program follows. ATLAS program features related to classroom practices in math are depicted in Figure C.3.

Organizational/Structural Features

ATLAS recognizes the different educational aspirations and abilities of students. Thus, the program provides *Flexible Grouping* in instruction. The grouping structure suggests varying the mode of instruction and tailoring it to both the specific lesson and the needs of the students in order to provide increased learning opportunities in the classroom. For example, the groupings may include *Small Groups*, *Heterogeneous Groups* and *Individualized Instruction*. The curriculum (or content) is organized around *Thematic Units* and the program places high emphasis on linking academic content to real-life situations. *Interactive Learning* is encouraged to increase student engagement.

The model emphasizes the use of assessment as an active tool both to teachers and students. For teachers, the various assessments give more information about students' existing knowledge, strengths, and needs, and the degree to which new learning has occurred. Teachers use this information in planning instruction, adjusting curriculum, and improving their teaching. For students, the information from these assessments gives direct feedback, encouraging students to be more active rather than passive in meeting the school's learning standards. Features associated with the model related to assessment include *Diagnostic Procedures* and *Performance Assessment*. In addition, the model encourages portfolio assessment, and these portfolios often are used by the S*tudy* G*roup/Teachers*, in order to continually study school and student performance. Some schools may use *Cross-Year Portfolios* in order to view student (and school) growth longitudinally.

The ATLAS model does not require specific methods for addressing the needs of students who are having difficulties meeting learning standards. However, there are indications that some schools adopt such methods as *Double Periods* of math and *Supplemental Learning* and *Peer Tutoring* as a means of meeting the needs of these students.

Classroom Instruction Features

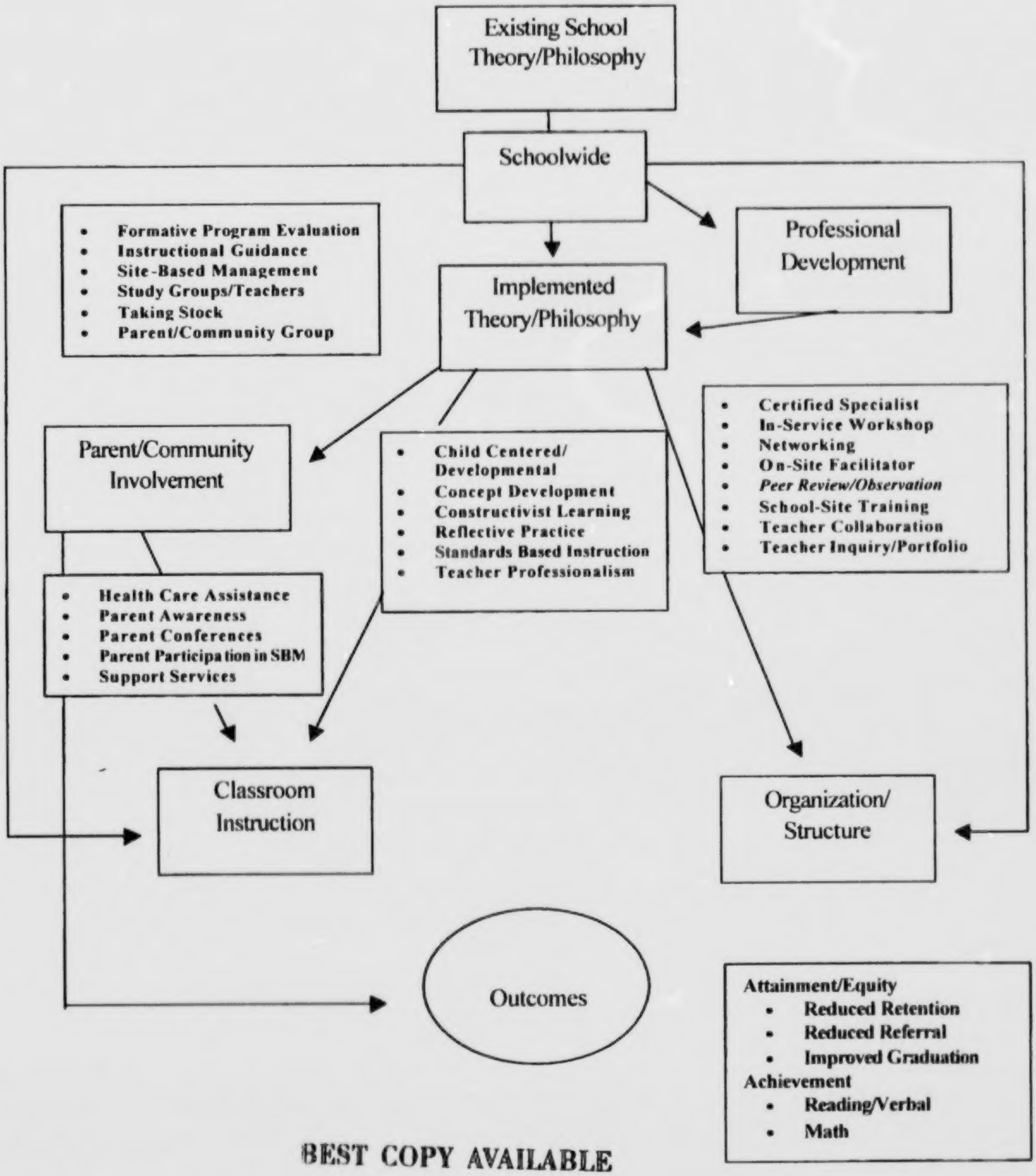
The ATLAS model places a high emphasis on teaching for understanding. Constructivist methods that encourage meaning-oriented learning and that encourage linking academic knowledge to the "real world" are emphasized. As such, *Authentic Instruction*, where students' experiences and interests are built upon, is a common instructional method. To encourage conceptual understandings of math, *Interpreting/ Discussion/Math* is used. In addition, students often form *Collaborative Teams* for *Problem-Solving* activities, *Inquiry Learning* and *Project-Based Instruction* that focuses on real-life issues. Schools may use *Computer as a Tool* to enrich instruction.

As described in the previous section, the model places a strong emphasis on the use of assessment as a part of the instructional process, including the use of broad range *Performance Assessments* as instructional tools. The ATLAS model promotes a stronger form of *Performance Assessments* (often considered to be the use of pieces of student work to provide feedback to the teacher), where it is used also as an instructional method. The model promotes student demonstrations of end products (e.g., at the completion of a project or an instructional unit) that intentionally incorporate specific learning standards. This encourages students to be active in determining how they will demonstrate meeting standards, and places more responsibility on the student to achieve and surpass the standard than to just "meet it" at a passing (e.g. 70 percent) level. For example, ATLAS schools often hold student exhibitions where students display or present the results of various long-term student projects. Students approach the exhibitions as teaching efforts—where they, through the exhibition, are teaching the audience.

Math Outcomes

ATLAS is a process-driven reform, and schools and teachers work together to develop a coherent program across a K-12 pathway. While the model promotes the use of constructivist methods and authentic assessment, it takes a hands-off approach in specifying a curricular program—leaving that to the school to design. Thus, specific math outcomes, based solely on the model design, may vary across schools—as each school design will differ. However, the model encourages schools to use the local and state learning standards in the process of developing clearly articulated learning goals across grades and subjects. Thus the math outcomes should relate to the local (or state) learning standards.

Figure C.1
ATLAS Communities:
Program Reform Features



Existing School Theory/Philosophy
Schoolwide
Formative Program Evaluation
Instructional Guidance
Site-Based Management
Study Groups/Teachers
Taking Stock
Parent/Community Group
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
Child Centered/ Developmental
Concept Development
Constructivist Learning
Reflective Practice
Standards Based Instruction
Teacher Professionalism
Certified Specialist
In-Service Workshop
Networking
On-Site Facilitator
Peer Review/Observation
School-Site Training
Teacher Collaboration
Teacher Inquiry/Portfolio
Health Care Assistance
Parent Awareness
Parent Conferences
Parent Participation in SBM
Support Services
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referral
Improved Graduation
Achievement
Reading/Verbal
Math

Figure C.2
ATLAS Communities:
Reading/English Program Features

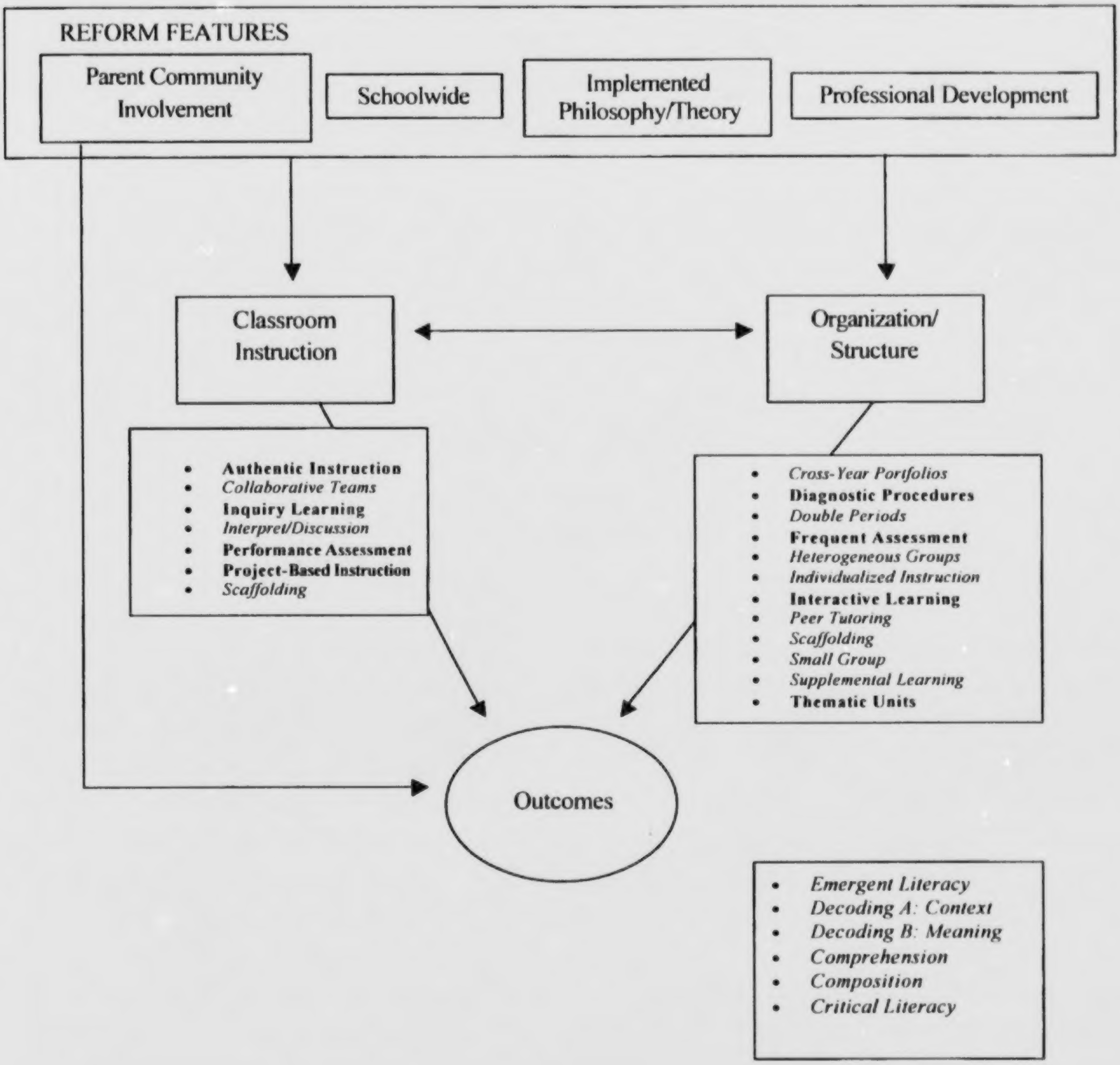

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
• Authentic Instruction
• Collaborative Teams
• Inquiry Learning
• Interpret/Discussion
• Performance Assessment
• Project-Based Instruction
• Scaffolding
• Cross-Year Portfolios
• Diagnostic Procedures
• Double Periods
• Frequent Assessment
• Heterogeneous Groups
• Individualized Instruction
• Interactive Learning
• Peer Tutoring
• Scaffolding
• Small Group
• Supplemental Learning
• Thematic Units
Outcomes
• Emergent Literacy
• Decoding A: Context
• Decoding B: Meaning
• Comprehension
• Composition
• Critical Literacy

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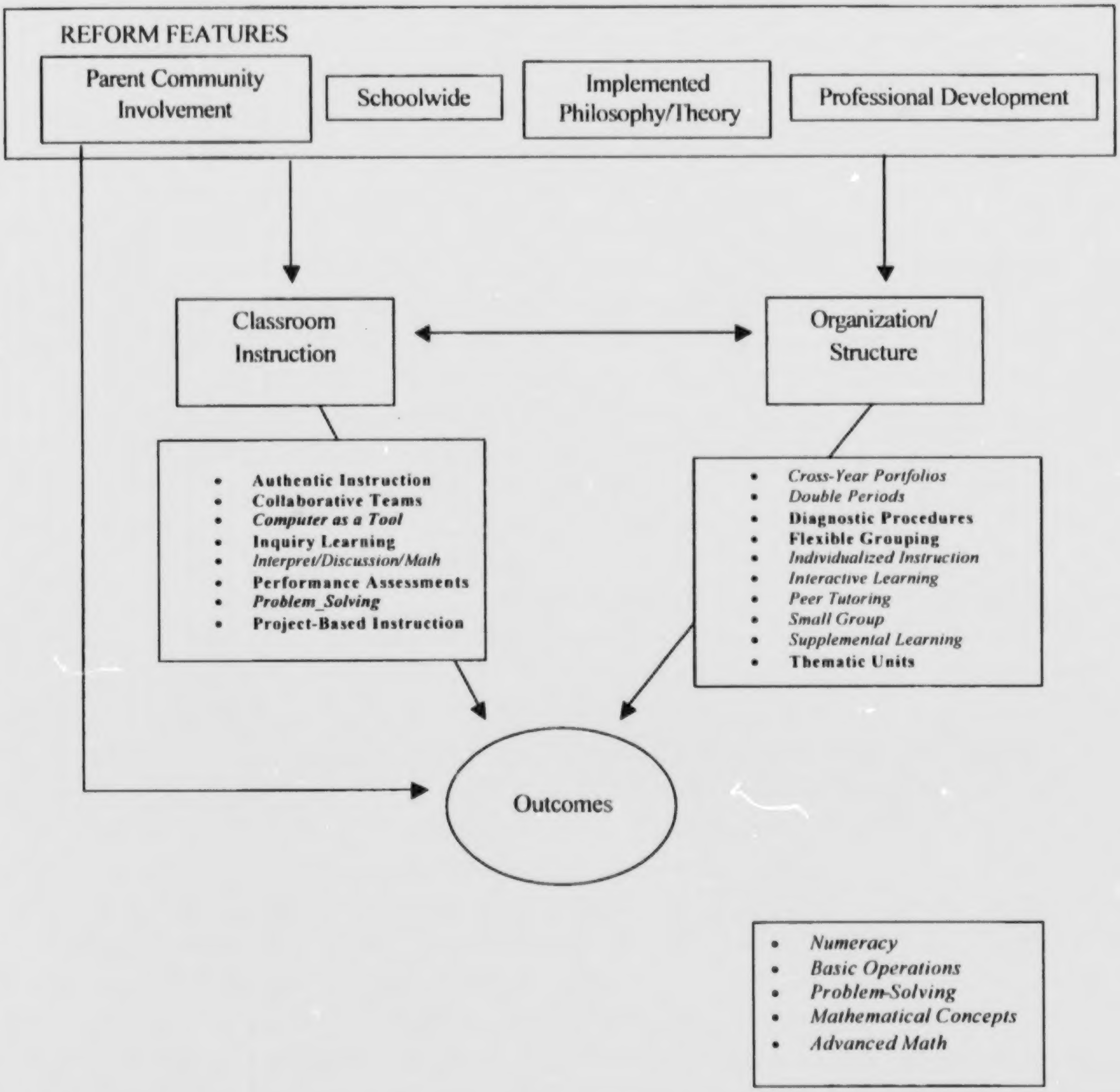
Figure C.3
ATLAS Communities:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Computer as a Tool
Inquiry Learning
Interpret/Discussion/Math
Performance Assessments
Problem_Solving
Project-Based Instruction
Cross-Year Portfolios
Double Periods
Diagnostic Procedures
Flexible Grouping
Individualized Instruction
Interactive Learning
Peer Tutoring
Small Group
Supplemental Learning
Thematic Units
Outcomes
Numeracy
Basic Operations
Problem-Solving
Mathematical Concepts
Advanced Math

ATLAS Communities

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D. Early Intervention in Reading

Reform Program Features

Early Intervention in Reading (EIR) is a kindergarten through fourth-grade program designed to help children who are struggling to learn to read. Children are placed in *Small Groups* (of five to seven) within the classroom and are given systematic reading instruction for twenty to thirty minutes each day. The program emphasizes coaching children rather than transmission/reception. Teachers are encouraged to help the children by setting high expectations. The program emphasizes continually asking higher-level questions.

EIR is not a school restructuring program but rather a reading intervention that a school could employ within its locally developed comprehensive restructuring program. It could easily be used with other types of instruction or reform models. The reform features included in the EIR model (Figure D.1) are summarized below.

Schoolwide Features

Because EIR is by design a reading intervention program and not a school restructuring reform, schoolwide features do not appear. However, the program uses a sophisticated, sequenced set of structures with individual flexibility that is paramount to *Systematic Learning*. Kindergarten is more prescriptive than Grades 1 to 4. A *Formative Program Evaluation* can be undertaken by individuals from the reform provider at the request of the individual school.

Implemented Theoretical Features

EIR is a program that is built around creating *Phonological Awareness*. At the heart of the program is the belief that good instruction can instill confidence (through a system of learning) that will allow students to eventually take over the process of learning. Thus, a *Self-Extending System* is created.

The EIR program has some *Prescribed Teacher Practices* in terms of types and sequence of methods. There is ample room for application of individual creativity in teaching. First-year teachers are urged to closely follow the process and use EIR materials. As their familiarity with the focus and sophistication of the program grows, teachers are encouraged to adapt the program according to their individual strengths.

Professional Development Features

Professional development is important to the EIR program. This development is mainly through various forms of interactive technology (e.g., conference calls, video sharing, the internet). Teachers can be trained in the EIR program through these interactive methods or, upon the request of the school, a *Certified Specialist* will come to train the teachers. Each EIR site requires two *On-Site Facilitators.* One facilitator is a technology specialist, while the other coordinates the program. EIR offers *Networking* and ongoing support through these technologies. In addition, *Teacher Inquiry/Portfolios* are shared and discussed by many EIR teachers through technology.

Parent/Community Involvement Features

Informing parents is an important part of the EIR program. Therefore both *Parent Awareness* and *Parent Communication* take place. Parents of an EIR student enter into a *Learning Contracts/Parent* in which they agree to be read to daily by their child. Therefore *Paired Reading* takes place every single day.

Book Distribution is a part of the EIR program. Students are lent various books from school and sometimes given little books. *Parent Volunteers* may be a part of the EIR program.

Systemic Outcomes

EIR is a comprehensive early reading intervention. This model logically links to both *Attainment/Equity* outcomes (reduction in retention and referral) in early elementary grades and improvement in test scores and pass rates on *Achievement* tests for reading. Schools choosing this reform model will need to develop local strategies for math and other components of comprehensive school reform.

Reading/ Language Arts Program Features

EIR reading program features (Figure D.2) are the focal point of the CSR model. These features are described below.

Organizational/Structural Features

Because EIR is a fairly systematic recovery method, Organizational/Structural features are quite apparent. EIR is a classroom-based *Pull-Out Program* that teaches struggling readers in *Small Groups* within the classroom. *Diagnostic Procedures* and *Frequent Assessments* are used to determine which children need instruction and when these children are discontinued from the program.

EIR emphasizes the importance of *Interactive Learning,* which can be seen through many of its strategies. For example, *Drama* is used quite often, especially in kindergarten. Children in the EIR program read from a variety of sources. This includes both *Basal Readers* and *Trade Books* within a *Reading Canon.* Schools may use their own books; however, they are encouraged to use EIR materials during their first year of implementation as they learn how EIR levels material for children. In addition, *One-on-One Tutoring* is used to increase students' success.

Classroom Instructional Features

As mentioned before, because EIR is a systemic approach, classroom instructional features are especially evident. Within this instruction, *Multisensory Activities* such as *Drama* are important, particularly in kindergarten. Students in the EIR program enter into a *Learning Contracts/Student,* which requires them to read to their parents daily.

Echo or Choral Reading is a feature that is used in the EIR program. In addition to reading, children also write *Essays* and engage in different guided-writing activities. Children not only read in the program but they also discuss what they read. Therefore, *Interpreting/Discussion/Reading* is an important aspect of the program.

Children in the EIR program read, and they read a great deal. This reading can take the form of *Pacing Oral Reading, Paired Reading, Silent Individual Reading, Storytelling,* or *Reading Drills.* Students may work on reading alone or as a part of a *Collaborative Team. Big Books* may be used. When children read along with adults, teachers and volunteers are encouraged to let the child be the leading voice during the reading activity.

Children not only read, but they are encouraged to think critically about what they read. Therefore, *Meaning Context/Predicting* is a part of EIR methods. In addition to reading, children in the EIR program also write to ensure literacy acquisition. This writing may be in the form of *Journals* or *Creative Writing.*

Reading/Language Arts Outcomes

EIR is a recovery program for students who are struggling to read. The program is aimed at creating *Emergent Literacy* (reading readiness) in kindergarten, *Decoding*, and *Comprehension. Decoding B (Meaning Oriented)* and *Comprehension* in particular are resultant outcomes of the EIR program. Through this outcome, children learn to read. These skills create a base for promoting more advanced skills, such as *Composition* and *Critical Literacy*. These outcomes, along with *Decoding A* (context free), could be emphasized at local discretion.

Figure D.1
Early Intervention in Reading:
Reform Program Features

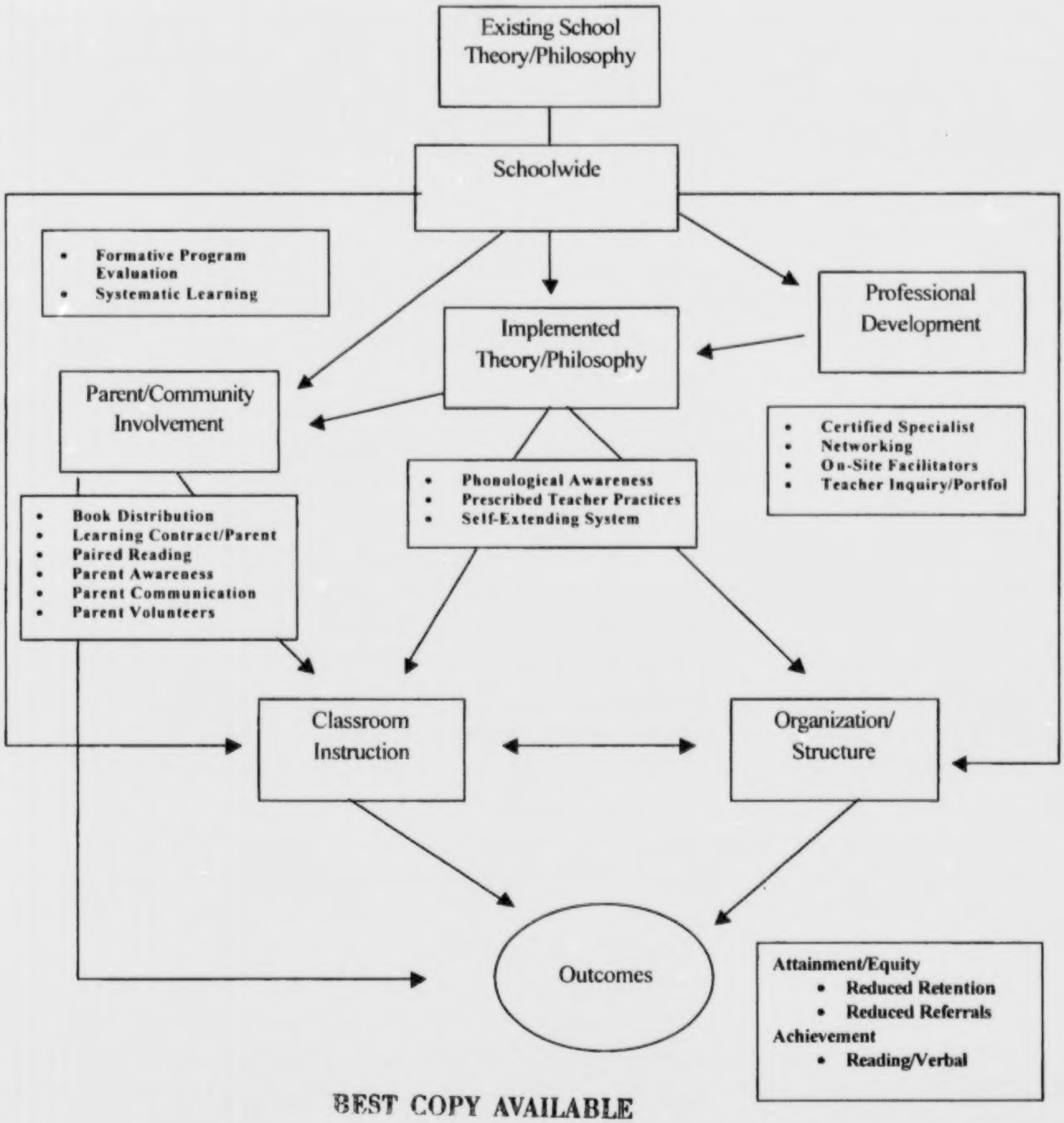
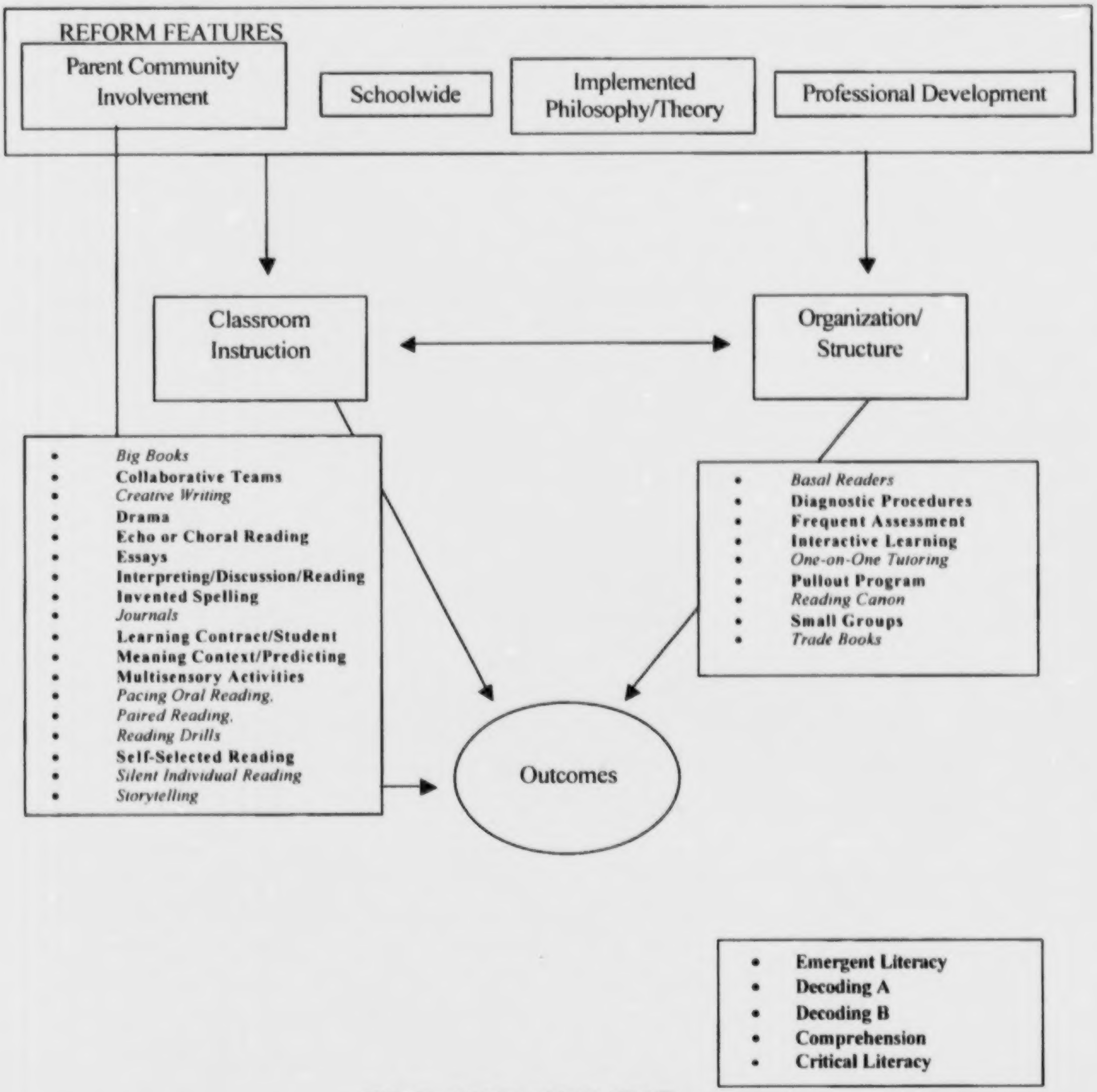

Existing School Theory/Philosophy
Schoolwide
Formative Program Evaluation
Systematic Learning
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
Certified Specialist
Networking
On-Site Facilitators
Teacher Inquiry/Portfol
Phonological Awareness
Prescribed Teacher Practices
Self-Extending System
Book Distribution
Learning Contract/Parent
Paired Reading
Parent Awareness
Parent Communication
Parent Volunteers
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referrals
Achievement
Reading/Verbal

Figure D.2
Early Intervention in Reading:
Reading/Language Arts Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Big Books
Collaborative Teams
Creative Writing
Drama
Echo or Choral Reading
Essays
Interpreting/Discussion/Reading
Invented Spelling
Journals
Learning Contract/Student
Meaning Context/Predicting
Multisensory Activities
Pacing Oral Reading.
Paired Reading.
Reading Drills
Self-Selected Reading
Silent Individual Reading
Storytelling
Basal Readers
Diagnostic Procedures
Frequent Assessment
Interactive Learning
One-on-One Tutoring
Pullout Program
Reading Canon
Small Groups
Trade Books
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension
Critical Literacy

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E. First Steps

Reform Program Features

First Steps is a professional development reform focusing on language development. The model serves as a teacher resource for closing the loop between diagnostic observation of child development and classroom instruction. At the center of the model (and the process) are developmental continua for reading, writing, spelling, and oral language. These continua list hundreds of behaviors and attitudes, grouped into several stages of development. The model provides understanding about the developmental nature of reading acquisition and more complex reading skills. The model includes teaching strategies, specific outcomes, and parent involvement ideas for each stage of development.

These continua—and the suggested material associated with them—were designed to enable an iterative process. This includes careful observation of child behavior, assessment of this behavior in comparison to the developmental continua, adoption of methods intended to build on strengths and improve areas of weakness, and back to observation, and so forth.

The program is designed to meet the needs of all students regardless of age or range of abilities. In First Steps, the progress of all students is monitored, which enables them to make progress based on their individual stages of development. The program features included in First Steps (Figure E.1) are summarized below.

Schoolwide Processes

First Steps is concerned with "linking assessment, teaching, and learning" and, therefore, Formative Program Evaluation is key to this model's implementation.

Implemented Theoretical/Philosophical Features

The First Steps model emphasizes the importance of a *Child-Centered/ Developmental* curriculum in a *Whole Language* environment. Because the model is developmental, *Student Empowerment* can be significant. *Reflective Practice* is emphasized in the model through the continual loop of assessing student work on the developmental continua and revising instructional plans based on that student work.

Professional Development Features

First Steps provides *School-Site Training* at the beginning of a school's implementation of the program. Simultaneously, designated *On-Site Facilitators* go through a *Training of Trainers* to prepare educators to become users, presenters, and support providers for First Steps teachers within their district. This makes *Networking* a key to the professional development features of First Steps by providing ongoing support both to on-site facilitators and schools. Each component of First Steps (reading, writing, spelling, and oral language) has its own developmental continuum and teaching strategies. This makes it important for classroom teachers to be trained in each of the components through school-based courses.

Parent/Community Involvement Features

Teachers include parents in the assessment and monitoring process of First Steps by asking them for observations they have made of their child at home. Therefore, *Parent Communication* and *Parent Awareness* are integral parts of First Steps. Parents also are provided with pages of ideas that suggest ways they can support their children's development at home; this includes *Paired Reading* accompanied with *Parent Instructional Training* to increase the effectiveness of the strategy.

Systemic Outcomes

First Steps has linkages to early reading that should promote improvement in early *Attainment/Equity* (reductions in referral and retention) and *Achievement* (testing reading). However, it focuses on early primary reading but not on other outcomes.

Reading/Language Arts Program Features

The reading program features (Figure E.2) are central to the First Steps model. They are summarized below.

Organizational/Structural Features

First Steps is a reading program that is based on *Diagnostic Procedures* and *Frequent Assessment*. Because of the explication of language and literacy acquisition along an extended developmental continuum, the implementation of First Steps as a schoolwide program is optimal.

Teachers use the individual developmental continua both to guide their evaluation of what their students can do as well as to inform their planning for further development. Although continua are used, they are not intended to be a sequential order of progression. Instead, it is recognized that each student's developmental pathway is unique, and students may exhibit behaviors that are indicative of various phases of development. The continua are used to reflect a developmental view of learning and teaching to guide classroom instruction.

The First Steps program emphasizes the need for a *Literacy Rich Environment* with the use of *Trade Books* and *Small Group* activities.

Classroom Instruction Features

Primary to First Steps is the use of *Performance Assessment* to gauge student development. Accordingly, the instructional features used in First Steps depend on the developmental phase of the student. *Scaffolding* fits well with First Steps and is used to teach students complex tasks. The strategies across the continua reflect the program's emphasis on meaning. These include *Storytelling, Interpreting/Discussion/Reading,* and *Meaning Context/Predicting.* Student empowerment and love of reading are encouraged through *Big Books, Self-Selected Reading,* and *Silent Individual Reading.* First Steps blends reading and writing development through features such as *Creative Writing, Essays,* and *Journals.* Other teaching strategies include phonics, *Writing Mechanics,* and *Invented Spelling.*

Reading/Language Arts Outcomes

First Steps provides a comprehensive set of developmental continua for reading, writing, spelling, and oral language. It addresses students at all stages of reading development and, consequently, influences all reading outcomes.

The First Steps program identifies various stages of development for the areas of reading, writing, oral language, and spelling. Specific teaching strategies are emphasized at each of these stages. The specific outcomes that are targeted depend on the child's stage or "phase" of development.

First Steps emphasizes developmental, meaning-oriented reading instruction. Consequently, emergent literacy, decoding B ("meaning getting"), comprehension, and critical literacy are the outcomes emphasized by the reading curriculum of the First Steps Program.

Throughout the stages of development, the program emphasizes strategies that foster students' independence and enjoyment of reading.

Figure E.1
First Steps:
Reform Program Features

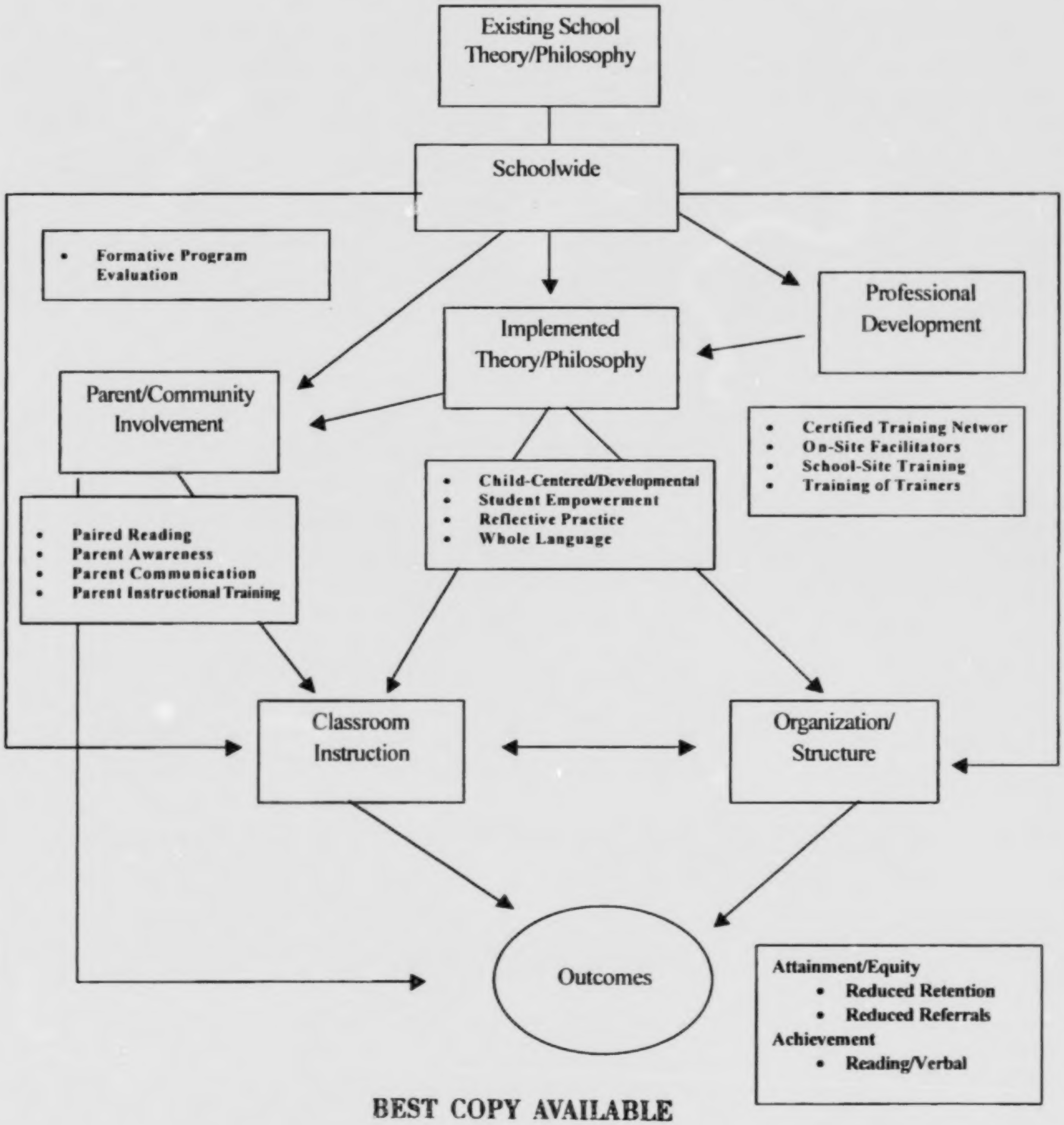
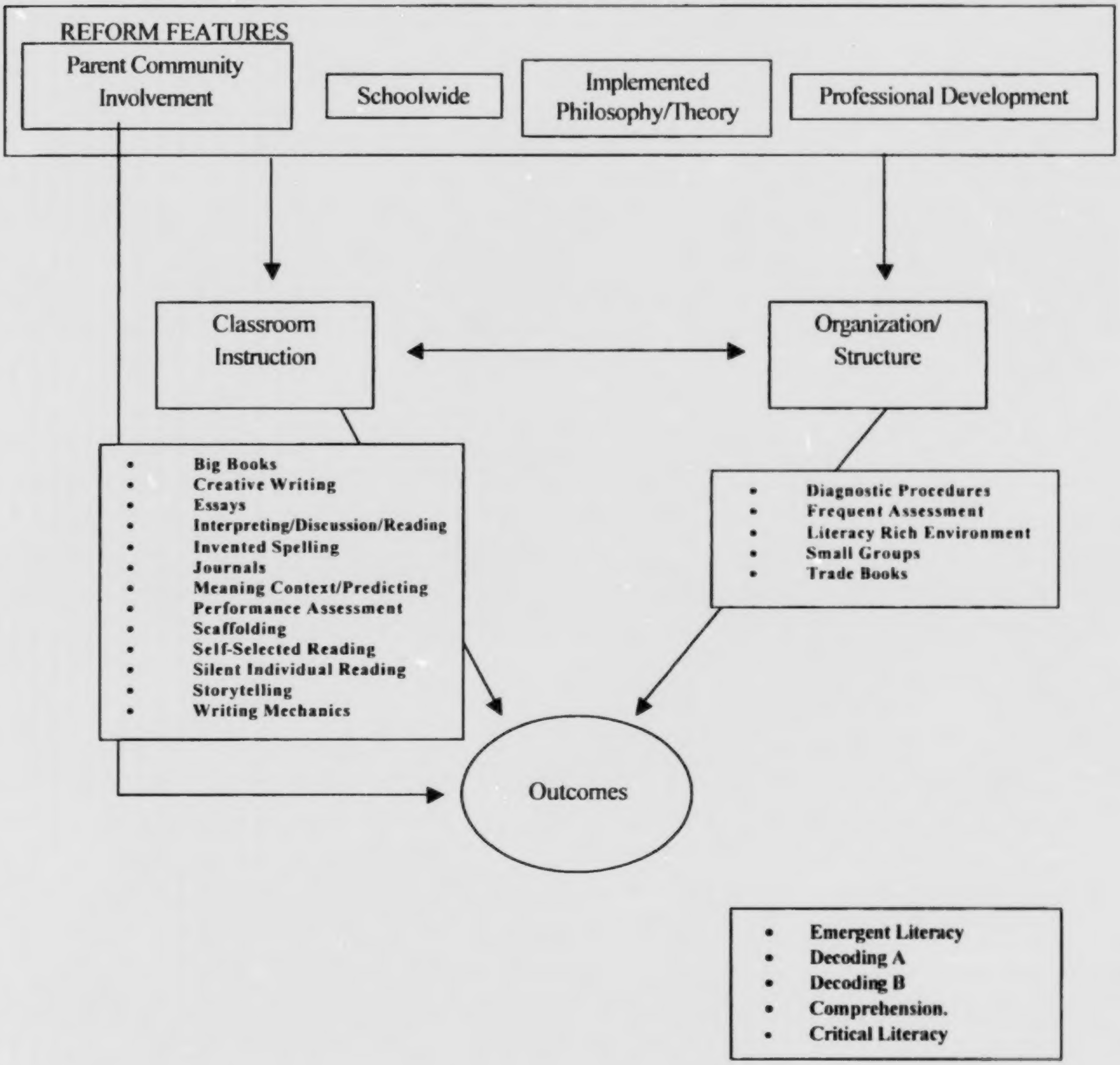

Existing School Theory/Philosophy
Schoolwide
Formative Program Evaluation
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
Certified Training Networ
On-Site Facilitators
School-Site Training
Training of Trainers
Child-Centered/Developmental
Student Empowerment
Reflective Practice
Whole Language
Paired Reading
Parent Awareness
Parent Communication
Parent Instructional Training
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referrals
Achievement
Reading/Verbal

Figure E.2
First Steps:
Reading/Language Arts Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Big Books
Creative Writing
Essays
Interpreting/Discussion/Reading
Invented Spelling
Journals
Meaning Context/Predicting
Performance Assessment
Scaffolding
Self-Selected Reading
Silent Individual Reading
Storytelling
Writing Mechanics
Diagnostic Procedures
Frequent Assessment
Literacy Rich Environment
Small Groups
Trade Books
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension.
Critical Literacy

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Lightspan Achieve Now

Reform Program Features

The Lightspan Achieve Now program is unique among the CSR programs described in this review in two ways. First, the program is primarily a technology-based, content area reform (reading and math). Second, the Lightspan Achieve Now designers are a for-profit organization. The K-8 program was initially designed as a supplemental program to enhance student learning in reading and math by providing extended time-on-task and by increasing parent involvement in student learning. The extended learning program involves the use of various Lightspan computer-based activities in reading and math that target increasing skill acquisition, and it can be used either in the classroom or as a stand-alone, supplemental program (e.g., an after-school computer lab). The home-involvement program includes training parents, loaning hardware (Sony's PlayStation®) to parents, and sending home Lightspan Adventures (learning games) that are coordinated with students' work at school.

With the advent of the CSR movement, the designers recognized that the Lightspan Achieve Now model could assist schools in their systemic restructuring efforts, by providing a process for studying student performance against state learning standards (reading and math) in order to develop and implement standards-based instruction. In this process, the Lightspan materials become articulated into the schools' reading and math curriculum. In addition, the design promotes the use of various professional development, organizational, and instructional features geared toward increasing student outcomes in reading and math. In addition, the designers continue to incorporate various technology (and internet) based resources to assist schools in using the Lightspan model to meet learning standards. For example, on the Lightspan internet is a data base linking specific state standards (by state, subject area, grade level, and sub-standard skill) to available materials and ideas such as lesson plans, portfolio and journal ideas, online resources, and Lightspan Adventure games.

It is important to differentiate the implementation of Lightspan as a supplemental program for improving math and reading skills through extended learning time and home involvement, versus implementing Lightspan as a professional development/schoolwide program for continuous school improvement. It is not a comprehensive reform per se. As a supplemental program, it could be implemented in isolation from the core work of the school and have little impact on the overall school program in terms of systemic school improvement. However, if implemented as a schoolwide professional development process, it provides a more comprehensive approach to school improvement, with specific attention to developing and implementing standards-based instruction. The school-improvement design encourages the use of program features (including professional development, organizational and classroom instructional features) that work together to strengthen student learning outcomes. Therefore, this review, and its assessment of the systemic outcomes addressed by the program, considers only the "professional development/schoolwide" design of the Lightspan Achieve Now program. The reform features in the Lightspan Achievement Now model are depicted in Figure F.1.

Schoolwide Features

Upon deciding to adopt the Lightspan Achieve Now program, a school—which has up to now worked with a sales representative—is assigned a Lightspan consultant (a *Certified Specialist)* who works as a professional development facilitator. Additionally, a *Reform Team* is formed composed of members of the faculty to work with the consultant to plan the implementation of the Lightspan program. The *Reform Team* works to ensure that the process is tailored to the needs of the school and encourages ownership of the project by the school by having members of the faculty directly involved in the implementation.

The Lightspan design promotes a systematic approach to create and continually improve standards-based instruction. This process involves a recurring cycle of research on student outcomes compared to learning standards, planning and implementing instruction based on that research, and assessing student outcomes through more research. To begin this cycle, schools gather baseline data on student outcomes that are used to guide the reform efforts. Each following year, the school conducts a two-part *Formative Program Evaluation* to be used by the school to refine their reform efforts. The staff conducts a self-implementation survey that provides feedback to the school about the degree of implementation (including the reform process, the use of standards-based instruction, and the home involvement program) and that serves as a point for self-reflection. Concurrently the Lightspan consultant gathers student outcome data that is reported to the school and to the designers.

Implemented Theories/Philosophies

The Lightspan design's primary theory of learning is *Standards-Based Instruction.* The design emphasizes that all students' learning can be increased through a standards-based research/planning/implementation and assessment cycle. The design also encourages using varied instructional methods to encourage student engagement, address individual student's needs, and provide all students with the opportunity to achieve high-learning standards. This philosophy is supported by the Lightspan design through professional development and the provision of various resources and services, including instructional materials and methods that can be used by the school to address the various learning standards. These resources include Lightspan Adventures (learning games), online resources, and a forum for electronic networking to other teachers and schools.

The Lightspan reading materials at the early grades are based on a *Phonological Awareness* approach to literacy acquisition. The program reinforces these methods through the parent component in which parents are trained to support students' home use of the Lightspan Adventures. However, because Lightspan tailors its materials and services to schools (and the local and state standards), the approach to reading and literacy is modified accordingly. Thus, the Lightspan design also incorporates features that are consistent with a balanced literacy approach.

Professional Development Features

When Lightspan moved from a supplemental and home-involvement program to a design for school reform, it expanded the role of professional development in its design. Teachers are trained through *School-Site Training* and receive additional *In-Service Workshops* in both the process of standards-based instruction (as discussed previously) as a means for school improvement (reform), and in using various technological resources as instructional methods. Each school works with a consultant who is a *Certified Specialist* and who provides professional development in the reform design. Schools dedicate a staff person to become a part-time *On-Site Facilitator* to assist the consultant and to provide classroom level support to the faculty.

Because of its technology base, electronic *Networking* is an especially salient feature. Teachers are encouraged to share ideas and lesson plans, as well as to participate in online forums geared toward teachers, parents, and students at the Lightspan internet site. At this web site, there are numerous additional resources to provide teachers with ongoing support for implementation of the program. Included are links to topic-oriented web sites, various online learning communities, and other interactive features.

Parent/Community Involvement Features

Because Lightspan was originally developed as a homework replacement program geared toward increasing parent involvement in student learning, parent involvement features play an important, supportive role in the design. Engaging parents is key to the home involvement component of Lightspan. Both *Parent Awareness* and *Parent Communication* are used as means to strengthen home and school connections upon which active partnerships are built. When the home-involvement materials are coordinated with classroom work, parents become active participants in the effort to improve student outcomes by reinforcing student (classroom) learning. Parents of a Lightspan student will receive *Parent Instructional Training* so that they will be able to operate the video games that are provided for home use, and be able to participate with their child in the learning activity. Each family in the Lightspan program receives a Sony PlayStation® and video games that help children learn at home. There is an implied *Learning Contracts/Parent* that requires that parents will make sure that students work with the Lightspan video games for thirty to sixty minutes a day.

The Lightspan design embraces parents as a valuable resource in the schools' efforts to meet high educational standards. The program treats parents as partners in skill acquisition through the home involvement program. In addition, Lightspan Achieve Now provides various resources directly to parents through the internet, including learning activities, educational information (e.g. scholarly articles on learning geared toward parents), and discussion forums.

Systemic Outcomes

Lightspan Achieve Now does not provide a comprehensive schoolwide reform model. Instead, it offers an integrated technology-based curricular reform package that focuses on teachers' professional development and family involvement. To the extent that the educational aspect of this reform model promotes gains in student learning outcomes, it could improve attainment/equity outcomes and achievement outcomes. However, this approach is less comprehensive than most other schoolwide models and, therefore, could have weaker linkages to systemic outcomes.

Reading Program Summary

Lightspan Achieve Now is a curricular program that uses computer software, internet resources, printed materials, and professional development for grades K-8. The program uses state reading standards to create standards-based instruction, incorporating various Lightspan materials and resources, in order to increase students' reading outcomes. The training in developing standards-based instruction not only ensures that the school approaches reading instruction with intention (i.e., to meet this specific standard, students will need to be able to do these specific tasks), but it encourages teachers to consider incorporating various methods into classroom instruction that will enhance student learning. For example, journaling activities are suggested as a means of increasing students' conceptual understanding of both abstract and concrete ideas. While the model encourages the incorporation of various Lightspan materials into the curriculum, the reading program is designed to augment rather than supplant the school's existing literacy/reading program.

The Lightspan design, while incorporating features for school improvement, maintains the importance of the original design—providing extending learning time and involving parents in student learning. Thus, the reading program associated with the design includes the home-involvement program (Sony PlayStation®/Lightspan Adventure learning games). One of Lightspan's main objectives is to encourage interaction among students, parents, and teachers toward a common goal—student achievement. The program features related to reading/language arts are depicted in Figure F.2.

Organizational/Structural Features

Assessment at the individual student level, the classroom level, and the schoolwide level are important to the Lightspan design. In the classroom, *Diagnostic Procedures* are used to assess students' needs, to which instruction is tailored. *Frequent Assessments* are used to assess students' progress toward standards, giving information to the teacher when a change of instructional approach is needed.

Lightspan materials/resources may be used to provide whole-group instruction, *Individualized Instruction* (in learning centers within the classroom), or *Supplemental Learning*. The program encourages *Flexible Grouping* depending on the needs of the students and the particular standards being addressed; teachers may use *Small Groups, One-on-One Tutoring*, or *Individualized Instruction.* Lightspan also encourages approaches geared toward increasing student engagement, such as *Interactive Learning* and *Thematic Units.*

The design encourages giving students extended time-on-task through technology that is personalized to meet the needs of individual students, thus providing *Supplemental Learning.* This may take place after school or through a *Pullout Program.*

Classroom Instructional Features

Several instructional features are directly related to the Lightspan reform design. Lightspan, based on interactive technology, incorporates both *Computer as a Tool* and *Computer Assisted Instruction* into the reading program. In addition, the design's emphasis on standards-based instruction requires the use of *Performance Assessments* to give feedback—beyond standardized tests—about student learning.

In addition, the design promotes various non-technology instructional methods to encourage literacy acquisition. Students are encouraged to build familiarity and ease with reading through *Echo or Choral Reading* and *Pacing Oral Reading*, and students actively engage in independent (from the teacher) reading through *Paired Reading* and *Silent Individual Reading.* Several features such as *Interpreting/Discussion/Reading* and *Meaning Context/Predicting* are used to increase meaning-oriented reading.

Lightspan's program emphasizes the importance of developing writing skills as part of literacy acquisition. Students use *Invented Spelling* to begin to learn the ways in which words become sentences and sentences become pieces of writing. Later students engage in writing activities such as *Journal* writing, *Essays,* and *Creative Writing* that serve both to strengthen writing skills and also to foster critical thinking.

Reading/Language Arts Outcomes

Lightspan's focus on providing varied learning opportunities for students in the beginning phases of literacy acquisition, including extended learning time through technology and the home-involvement program, should be effective in improving student reading outcomes. The incorporation of features consistent with both phonics instruction and meaning-oriented reading suggests that literacy outcomes should include *Emergent Literacy, Decoding A and B,* and *Comprehension*. In addition, the design incorporates various writing features that suggest *Composition* outcomes. Because fewer features present in the design are associated with *Critical Literacy*, the degree to which this would be addressed is based upon the state standards the school uses in their school improvement process. Indeed, early reports (information on school performance, reported by the company) suggest reading gains for students at schools using Lightspan, although confirmatory research is not yet available.

Math Program Features

Lightspan is a comprehensive program that provides interactive curriculum through software and teacher materials, professional development, assessment, and home-involvement program. The design emphasizes assessment both before and after the instruction process, and the provision of extended learning opportunities. Lightspan provides technological support and resources through a free internet site for students, parents, teachers, and administrators to access any time of the day.

The math program is integrated to the regular classroom instruction to promote students' learning outcomes. Math curriculum materials (K-8) include instructional software designed for specific learning objectives—e.g. practice, basic concepts, and test-taking skills. The Lightspan design promotes specific non-technology math features in order to increase the effectiveness of math instruction. The program features related to classroom practices in math education are depicted in Figure F.3.

Organizational/Structural Features

Teachers define specific objectives for an individual or a group of students, according to the results of *Diagnostic Procedures* and *Frequent Assessments*, which may be done after each objective or unit. The program can be used in three different ways: as whole group instruction, learning centers, and tutorial settings that may occur through *Supplemental Learning* or *Pullout Programs*.

Flexible Grouping allows the teacher to adjust methods and approaches based on the specific objectives being addressed and the students' particular needs regarding those objectives. Grouping configurations include *Small Groups*, *One-on-One Tutoring*, and *Individualized Instruction*.

Lightspan encourages the use of *Thematic Units* to create logical links between subject areas and encourage the transfer of knowledge from one domain to another. *Interactive Learning* is promoted as a means for deepening understanding of math concepts and may be provided through teacher-student, student-student, and student-student/internet (connecting students in different locales through the internet).

Classroom Instruction Features

Lightspan provides *Computer Assisted Instruction* at the classroom level and promotes the use of *Computer as a Tool.* Math journals and portfolios often are used as part of *Performance Assessments* that provide feedback to the teacher about student learning.

The Lightspan math materials are geared to accomplish several things: to provide additional practice at specific skills, to apply learned concepts in new settings, and to foster conceptual understanding of math abstractions that build the requisite foundation for learning advanced math in the future. Instructional features, including *Problem-Solving* and math simulations (software), are used for skill rehearsal and application. *Project-Based Instruction* may be used as means for making math relevant by having students apply math skills to accomplish interesting tasks. *Manipulatives* and math *Journals* foster conceptual understanding and math reasoning. Where appropriate, students work in *Collaborative Teams.*

Math Outcomes

The Lightspan math program centers on creating standards-based instruction based on local (state) standards, providing extended and varied time on task, and using assessments to refine instruction in order to help all students meet the standards. The Lightspan materials have been designed to match state standards, and thus incorporate various approaches, rather than a single approach that is either more computational or conceptual. Materials, methods, and resources are provided that address *Numeracy, Basic Operations,* and *Problem Solving. Mathematical Concepts* may be addressed by the program, depending upon the state standards being used by the school, in developing (delivering) standards-based instruction.

Figure F.1
Lightspan Achieve Now
Program Reform Features

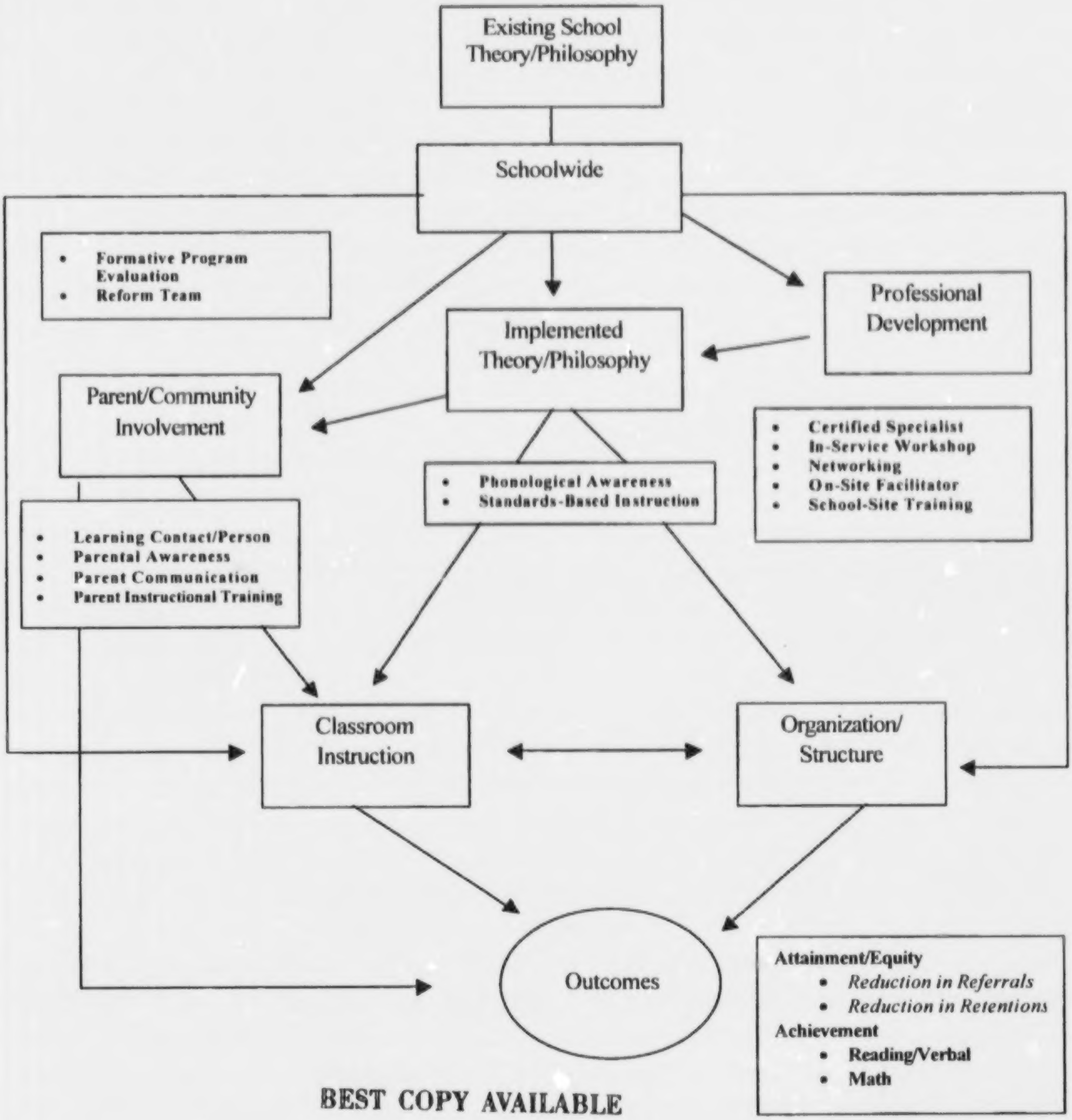
Existing School Theory/Philosophy
Schoolwide
Formative Program Evaluation
Reform Team
Implemented Theory/Philosophy
Professional Development
Parent/Community Involvement
Phonological Awareness
Standards-Based Instruction
Certified Specialist
In-Service Workshop
Networking
On-Site Facilitator
School-Site Training
Learning Contact/Person
Parental Awareness
Parent Communication
Parent Instructional Training
Classroom Instruction
Organization/Structure
Outcomes
Attainment/Equity
Reduction in Referrals
Reduction in Retentions
Achievement
Reading/Verbal
Math

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Figure F.2
Lightspan Achieve Now
Reading/Language Arts Program Features

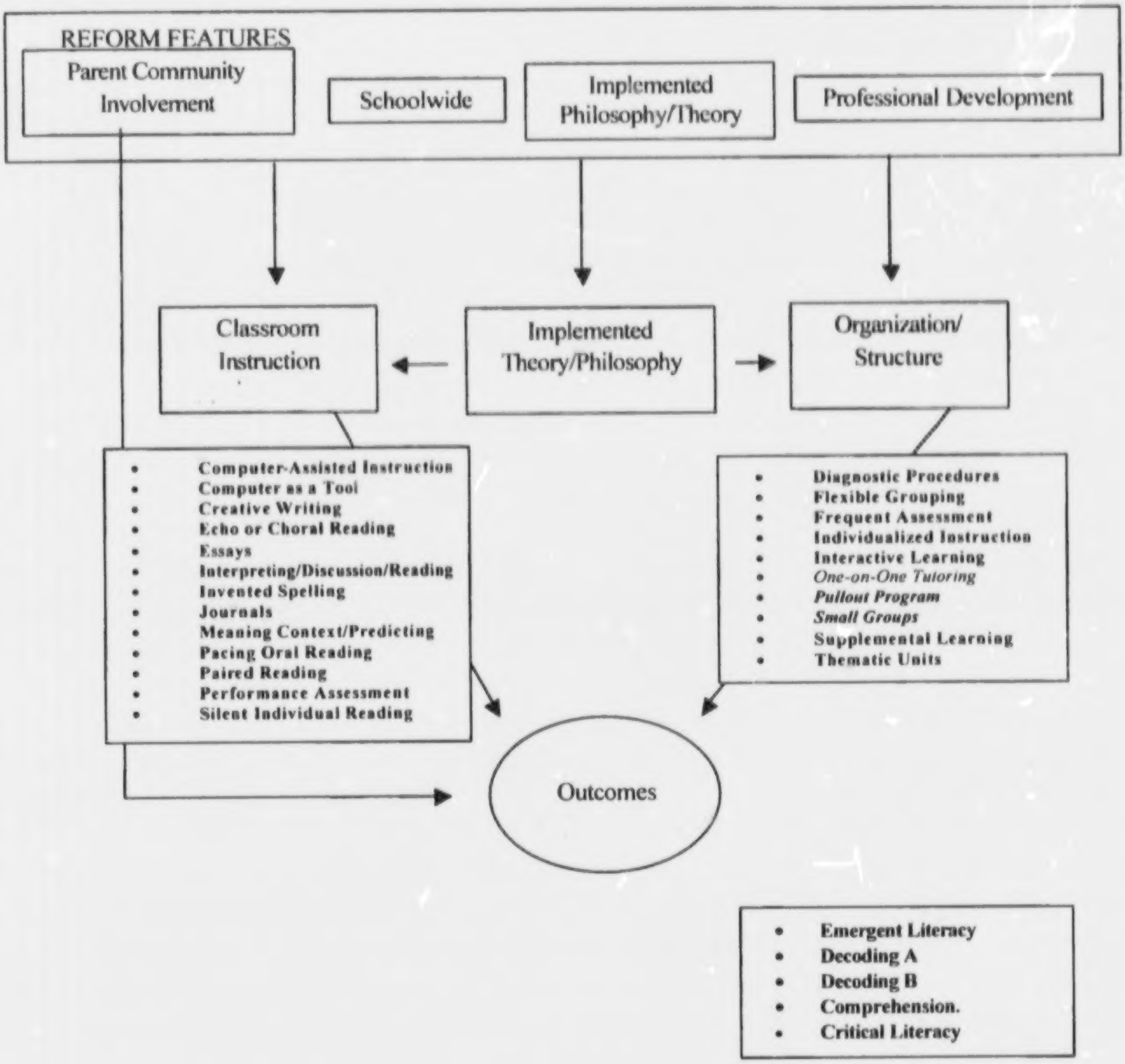
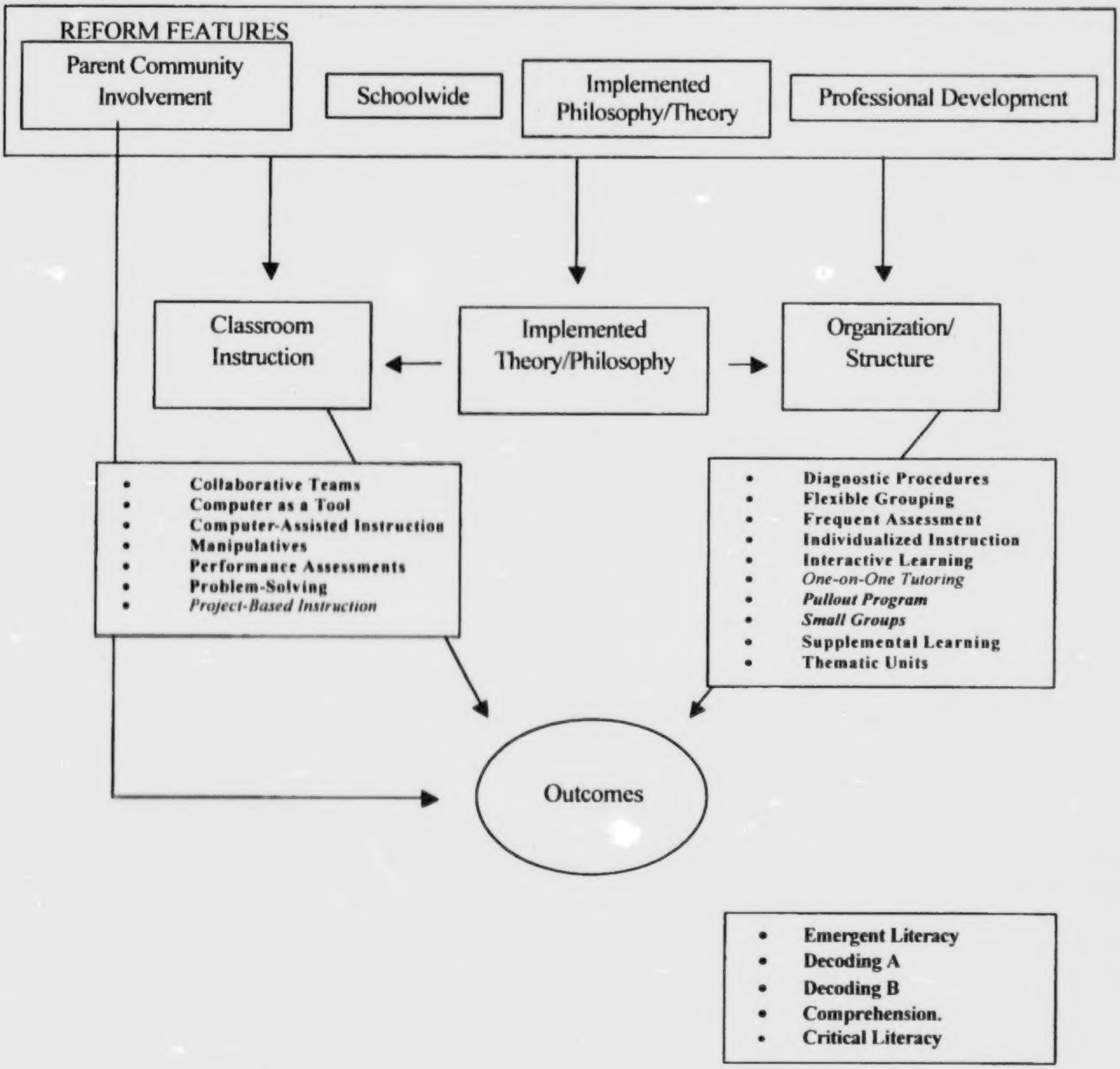

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Implemented Theory/Philosophy
Organization/ Structure
Computer-Assisted Instruction
Computer as a Tool
Creative Writing
Echo or Choral Reading
Essays
Interpreting/Discussion/Reading
Invented Spelling
Journals
Meaning Context/Predicting
Pacing Oral Reading
Paired Reading
Performance Assessment
Silent Individual Reading
Diagnostic Procedures
Flexible Grouping
Frequent Assessment
Individualized Instruction
Interactive Learning
One-on-One Tutoring
Pullout Program
Small Groups
Supplemental Learning
Thematic Units
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension.
Critical Literacy

Figure F.3
Lightspan Achieve Now: Math Program Features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Problem-Solving
Project-Based Instruction
Diagnostic Procedures
Flexible Grouping
Frequent Assessment
Individualized Instruction
Interactive Learning
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Lightspan Achieve Now
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G. Modern Red Schoolhouse

Reform Program Features

Modern Red Schoolhouse (MRSh) is a process-oriented, standards-driven school reform process that includes elementary, middle, and high schools, and that emphasizes the development of a learning community to find effective ways to teach. Originally, the project developed a set of rigorous content standards and "Hudson Units" assessments based on the standards from which schools would work. A major premise of Modern Red Schoolhouse is that all instruction should be carefully and intentionally designed to meet rigorous learning standards, use varying methods of instruction, and foster greater independence to—and give increasing responsibility for—students in the learning process. Since most states have developed learning standards to which schools are held accountable through public reporting and accreditation processes, Modern Red Schoolhouse adapted its reform design to use the schools' local standards (state or district), in place of the MRSh standards and materials, which are used instead as resources. The reform features included in the MRSh model (Figure G.1) are summarized below.

Schoolwide Features

After a *Buy-In* process, the school begins *Taking Stock,* looking at student data both to determine how the school is currently performing and to consider the current resources used by and available to the school. The school uses the *Taking Stock* results to develop a curriculum framework and instruction units through a *Backmapping* process.

The *Backmapping* process and the resulting curriculum units are the primary vehicles for change at the school. *Study Groups/Teacher* work though the process across the school year; the goal is to develop a fully articulated curriculum that has been tested by classroom teachers during the design process and that is ready to be implemented schoolwide. The process of *Backmapping* and the degree to which decisions being made by the school using the reform process are guided by the standards make the state standards themselves serve both as *Instructional Guidance* and *Systematic Learning* for the school.

Typically, standards group several grades together (i.e., K-3, 4-5, 6-8, 9-12) and only specify the terminal outcomes for that cluster of grades. For example, third-grade standards state what third-graders should know (content) and be able to do (performance), but it does not indicate K-2 level work. The MRSh *Backmapping* process involves studying the standards to determine a scope and sequence of instruction across all grades. During the process appropriate benchmarks or assessments are determined, which will give teachers feedback about students' progress through the curriculum. In terms of grading students, the assessments are less evaluative and more informative, so that if needed teachers can adapt the instruction to improve student learning.

Several schoolwide features related to classrooms and instruction are considered to be schoolwide in terms of the school requirements needed to implement them. First is the broadening of classrooms at the elementary level from strict grade levels to looser groupings of several grades (e.g. first through third) in multi-age classrooms, which may include *Looping*. (This provides greater latitude to teachers to teach developmentally to students by using a variety of strategies, flexible grouping (see organization/structure) and to adapt instruction to individual students' and groups of students' needs by freeing the adherence to grade limit.) The second feature is technology requirements for the school—the investment in technology prior to implementation. Schools are expected to use technology to enhance learning and expand the number of available learning resources. Technology is used for direct instruction, as a tool for instruction—such as regular viewing and analysis of cable news—and a means for communication among individuals within a school, between school sites, and with the MRSh specialists. Finally, schools are encouraged to develop *Learning Contracts/School* based on students' Individual Education Compacts (IEC, see also classroom instruction) where the school, the student, and the parents each agree to specific activities and responsibilities related to the student's IEC.

The model places value on decisions being made about the direction of the reform at the school-site by the school, and on broad participation. The school designates a *Reform Team* to work with MRSh specialists to plan, coordinate, and facilitate reform activities. In addition, Modern Red Schoolhouse uses *Site-Based Management* to relegate more autonomy for decision-making from the district to the school and to involve teachers in shared decision-making.

Participation in the reform is sought beyond the school through *Community Partnerships*. Schools are encouraged to seek different kinds of partnerships from all sectors of the community in three different types of initiatives: developing a pre-school consortium, a school-to-work initiative, and issues related to school climate.

An annual *Formative Program Evaluation* is conducted by the Modern Red Schoolhouse specialists. Data is collected electronically throughout the year to give feedback to the school and the model about implementation, student performance, school performance, and the needs of the school. This evaluation is used by the MRSh specialists to determine how best to serve the school, and it is returned to the school to assist with the ongoing reform efforts.

Implemented Theory/Philosophy

Although Modern Red Schoolhouse does not dictate the exact shape the reform will take in a school—using the reform process, the school will determine its instructional practices and programs—it does subscribe to a set of philosophies about learning that suggest the general direction of the academic program that is likely to evolve in a school. The model subscribes to a *Child-Centered/Developmental* theory of learning, in which the strengths of a child are built upon in a developmentally appropriate manner rather than prescribing sets of lessons determined by grade or age. Consistent with the developmental approach to learning, MRSh advocates a balanced literacy program that draws both from *Phonological Awareness* and *Whole Language*.

Modern Red Schoolhouse emphasizes *Concept Development* in instruction. The model uses the term "spiraling curriculum" to focus on the nature of an articulated curriculum (K-12) that grows not only in scope of knowledge, but also in complexity and sophistication of academic work—such that conceptual understanding is needed at every level of the curriculum so that students may build upon those understandings at more advanced levels. The model views the curriculum as building toward a *Self-Extending System*, in which students are given the skills and responsibility to take on increasing independence in their learning and studies and that encourages *Student Empowerment*.

Modern Red Schoolhouse's theories on reform are strongly interrelated. The model adheres to *Teacher Professionalism* where reform is believed to be most effective and efficacious when planned and implemented at the school-site using the expertise of the faculty. Teachers are involved in planning the implementation, analyzing the *Taking Stock*, developing the school curriculum through *Backmapping*, and selecting the professional development needed to best deliver appropriate instruction as determined in the curriculum. The model also posits that reforming the "what" and "how" of teaching in schools should be based on *Standards-Based Instruction*. The standards should drive the selection of content and suggest which methods and embedded performance assessments should be used during the instruction to ensure that the standards are being addressed. To ensure that all students attending the school receive the same standards-based instruction, there should be a *Prescribed Curriculum* developed by the teachers that is based on the standards. Modern Red Schoolhouse blends the teacher professionalism and the standards-based, prescribed curriculum features through *Backmapping*—in which a school-designed prescribed curriculum is used along with suggested instructional strategies.

Professional Development

Modern Red Schoolhouse uses an *On-Site Specialist* to provide the initial *School-Site Training* in the reform process. The school designates a leadership team, which receives additional training from Modern Red Schoolhouse and serves as *On-Site Facilitators*. The leadership team coordinates additional school-site professional development efforts and provides support to the faculty during implementation.

The reform relies heavily on professional development and recommends teachers attend twenty days of training during the school year. The extensive professional development includes training in the reform process and in specific instructional and assessment methods to assist teachers in the *Backmapping* process and in the classroom implementation of the teacher-developed, standards-based units. The configuration of the training is set by the school and district in terms of setting aside the time for trainings and often includes *In-Service Workshops*, release time, after-school activities, and/or summer institutes. During the *Taking Stock* and *Backmapping* processes, the reform team and the *On-Site Specialists* determine the professional development needs of the faculty and plan the training activities accordingly.

Along with professional development, teacher improvement is supported through *Teacher Collaboration* in planning of instruction. Teachers are encouraged to share their expertise, to test new teaching methods, and to share the results of those trials during the implementation of the reform. To support these efforts, the model recommends schools find ways to provide opportunities for collaboration. Teacher improvement is also supported by the model's electronic instructional management system, which has been developed to provide teachers with the means to record, analyze, and manage student performance data. This data is also aggregated at the school-level as part of the ongoing formative evaluation process.

Parent/Community Involvement

Modern Red Schoolhouse advocates parent involvement. *Parent Communication* is fostered through regular communication between teachers and parents through direct contact, parent conferences, and technology. *Parent Awareness* begins during the exploration and *Buy-In* process, continues through the reporting of *Taking Stock*, and the annual formative evaluations. MRSh suggests schools develop *Learning Contracts/Parent*, related to students' Individual Education, in which the parents agree to certain activities to assist students in reaching the goals specified in the IEC. The model encourages the use of *Parent Volunteers*.

Systemic Outcomes

The Modern Red Schoolhouse model provides a comprehensive and systematic process that can be implemented in any level school. Schools using this CSR model would implement strategies that tightly link to state standards, but that could emphasize addressing educational issues of local concern. The comprehensive nature of this reform model suggests tight linkages to improvements in *Attainment/Equity* (reduction in referral and retention, if not increase in graduation) and *Achievement* (in math and reading/verbal). The tight alignment between reform methods and standards and classroom practices should enable teachers to develop practices that align closely with state tests. There is a risk that such tight alignment might not create a learning environment that interests all children, so some adaptability may be needed. At the current time, this reform lacks substantial confirmatory research.

Reading/Language Program Features

Modern Red Schoolhouse is a process-oriented school reform that places emphasis on the development of a learning community to find effective ways to teach.

The community created looks at state standards and works backward or engages in *Backmapping* to develop teaching strategies to create a curriculum using best practices. Because each school creates their own unique curriculum, Modern Red Schoolhouse can look very different from school to school. Therefore, depending on the school, various features can be emphasized or possibly not present (Figure G.2).

Organizational/Structural Features

Modern Red Schoolhouse is a reform organized as a schoolwide learning community. The building of this community is important in the first year of the program. In and of itself, Modern Red Schoolhouse is not a systemic reading reform; however, the curriculum developed through the learning community could become systemic. That is to say, the extent to which Modern Red Schoolhouse is systemic is entirely dependent on the curriculum that teachers in the community create during Year Two or Year Three.

Although the model allows flexibility in the organizational structures designed by schools, it strongly advocates several features to be incorporated. MRSh encourages schools to develop programs that foster *Interactive Learning. Thematic Units* are often used to organize course content. *Frequent Assessments* are to be used to gauge student learning and allow for adapting instruction accordingly. The model recommends using *Flexible Grouping* so that teachers can look at students and projects and decide what type of grouping would be best suited to a given project, such as *Small Groups* or *Individualized Instruction.*

The model encourages schools to develop strategies to ensure that all students achieve academically. Thus, schools are likely to implement program features, such as *Supplemental Learning,* to address this issue.

Classroom Instructional Features

At the classroom/instructional level there are very few features that are intrinsically part of the reform. This is due to Modern Red Schoolhouse's philosophy that the reform should be developed based on the individual school. However, the reform—through *Backmapping*—requires the incorporation of *Performance Assessments* into the standards-based units. The model also requires the use of *Computer as a Tool* to simultaneously strengthen skills and build technological literacy. MRSh recommends *Project-Based Instruction* as a means for developing content-rich, relevant instruction. Related methods that are encouraged by the model include *Authentic Instruction* and *Collaborative Teams.* To individualize the program some MRSh schools develop individual education compacts for each student, which serve as *Learning Contracts/Student* and specify the learning goals and responsibilities of the student, school, and parent.

An interesting required part of this reform is that in every grade, foreign language instruction must occur along with a focus on *Cultural Literacy*. This is a type of literacy that we have not seen in other reforms.

Reading/Language Arts

Because there are no standard classroom features in this model, it is difficult to say that there are specific literacy outcomes for students. Outcomes will be related to the standards upon which the *Backmapping* is based, and the types of professional development sought by the school. Based on this approach, the reform suggests that students will experience achievement in reading. Whether the implementation of classroom practices links to literacy outcomes (*Emergent Literacy, Decoding A & B, Comprehension, Composition,* and *Critical Literacy*) depends on the strategies teachers implement. High schools implementing this reform will have opportunities to enhance advanced language arts learning outcomes.

Math Program Features

The math program in Modern Red Schoolhouse uses a similar process (Figure G.3). The classroom practices in the math program are outlined below.

Organization/Structure

The primary goal of Modern Red Schoolhouse is to establish a schoolwide learning community, in which the instruction is classroom-based. However, depending on the courses and subjects, teachers are encouraged to use *Flexible Grouping,* such as *Small Groups* and *Individualized Instruction*. Students' performances are frequently tested using performance-based *Frequent Assessment* techniques, including "Watershed Assessments," and "Student Reports." Teachers are encouraged to use *Supplemental Learning* strategies depending on the students' needs. Course content is often organized around *Thematic Units*.

Classroom Instruction

While Modern Red Schoolhouse does not designate a specific math program or set of methods, it does require several instructional features, and suggests other features based on the teaching philosophies of the model. *Performance Assessments* are embedded into the curriculum, into which *Project-Based Instruction* and *Collaborative Teams* are often incorporated. In addition, where applicable, the model strongly suggests the use of *Computer as a Tool* including electronic communication for developing conceptual understanding of math through writing and discussing with other students and teachers. The model promotes methods to help students conceptualize the subject and relate the instruction to their own world, such as the use of *Manipulatives* and *Interpreting/Discussion/Math*. In addition, *Learning Contracts/Students* and *Authentic Instruction* may be used to allow students to take control of their own learning.

Math Outcomes

Modern Red Schoolhouse provides a great deal of support at the schoolwide, professional development, and parental involvement levels. However, schools develop their own curriculum and teaching strategies depending on their needs. Thus, implementation of the features can vary greatly from school to school, which makes it harder to determine the program outcomes. Outcomes will be related to the standards used, professional development sought, and the model's emphasis on *Concept Development*. Thus, to the extent that state standards emphasize the math outcome (i.e. numeracy, basic operations, etc.), this reform should link to these same outcomes.

Figure G.1
Modern Red Schoolhouse:
Reform Program Features

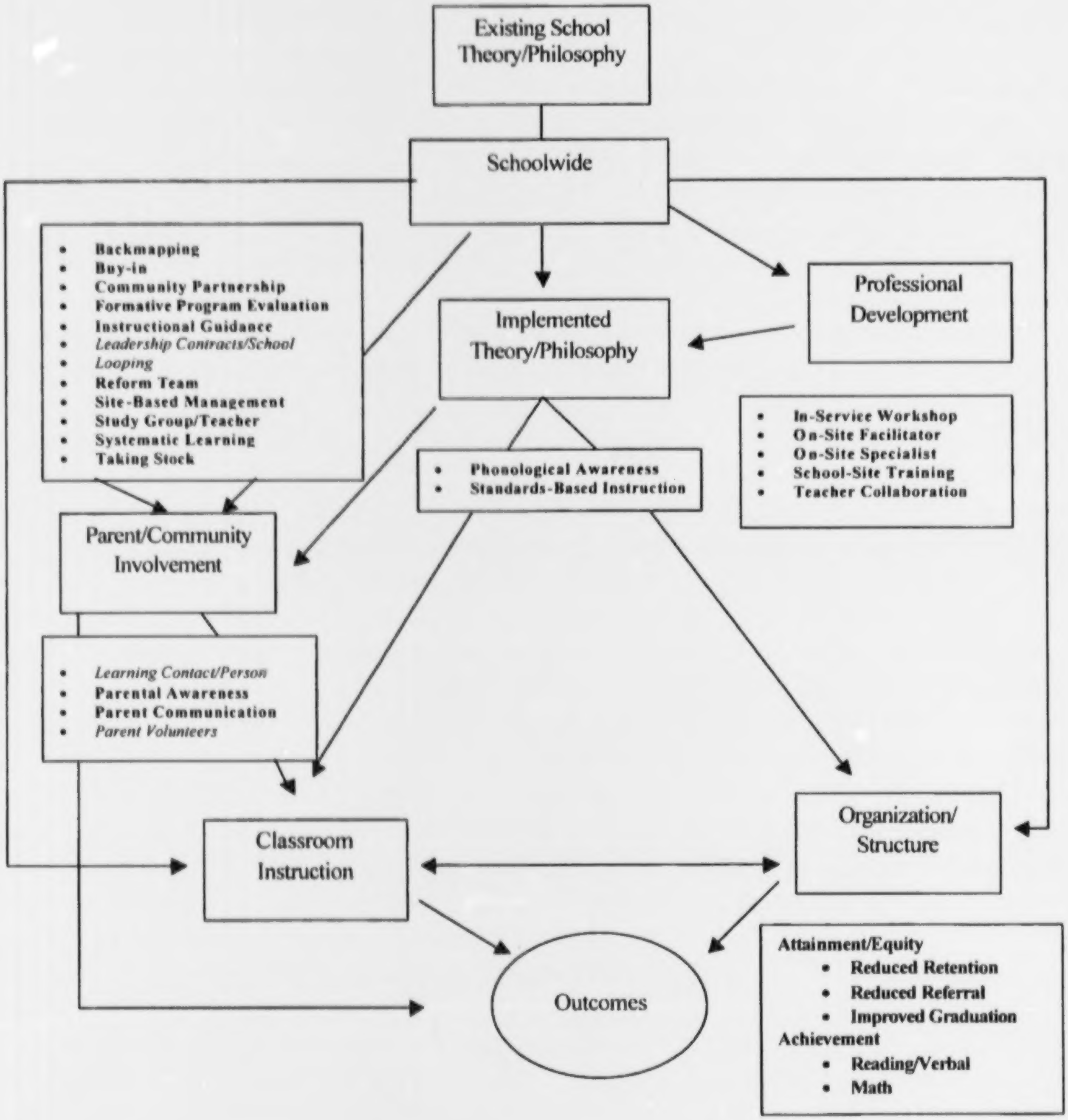
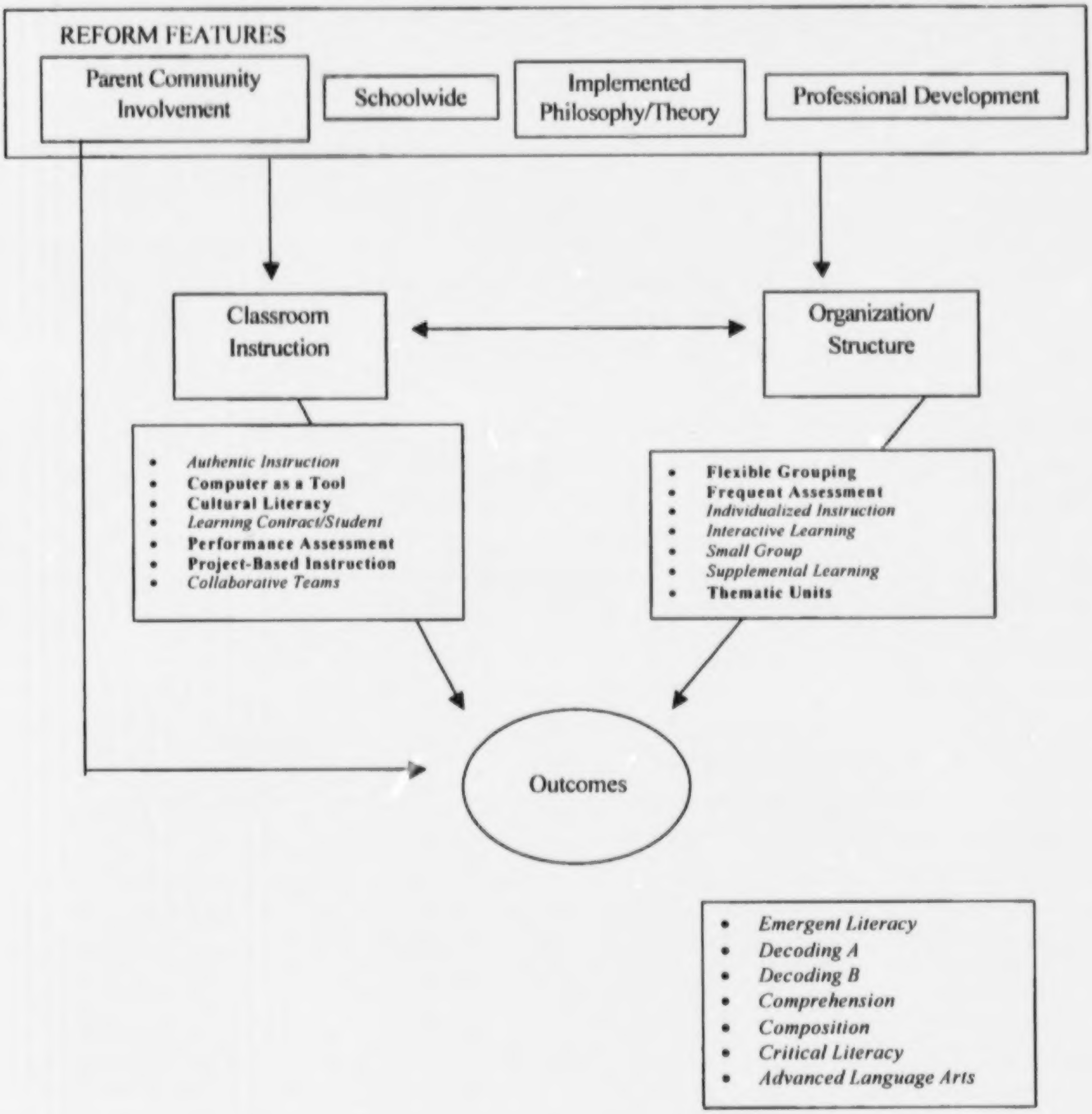
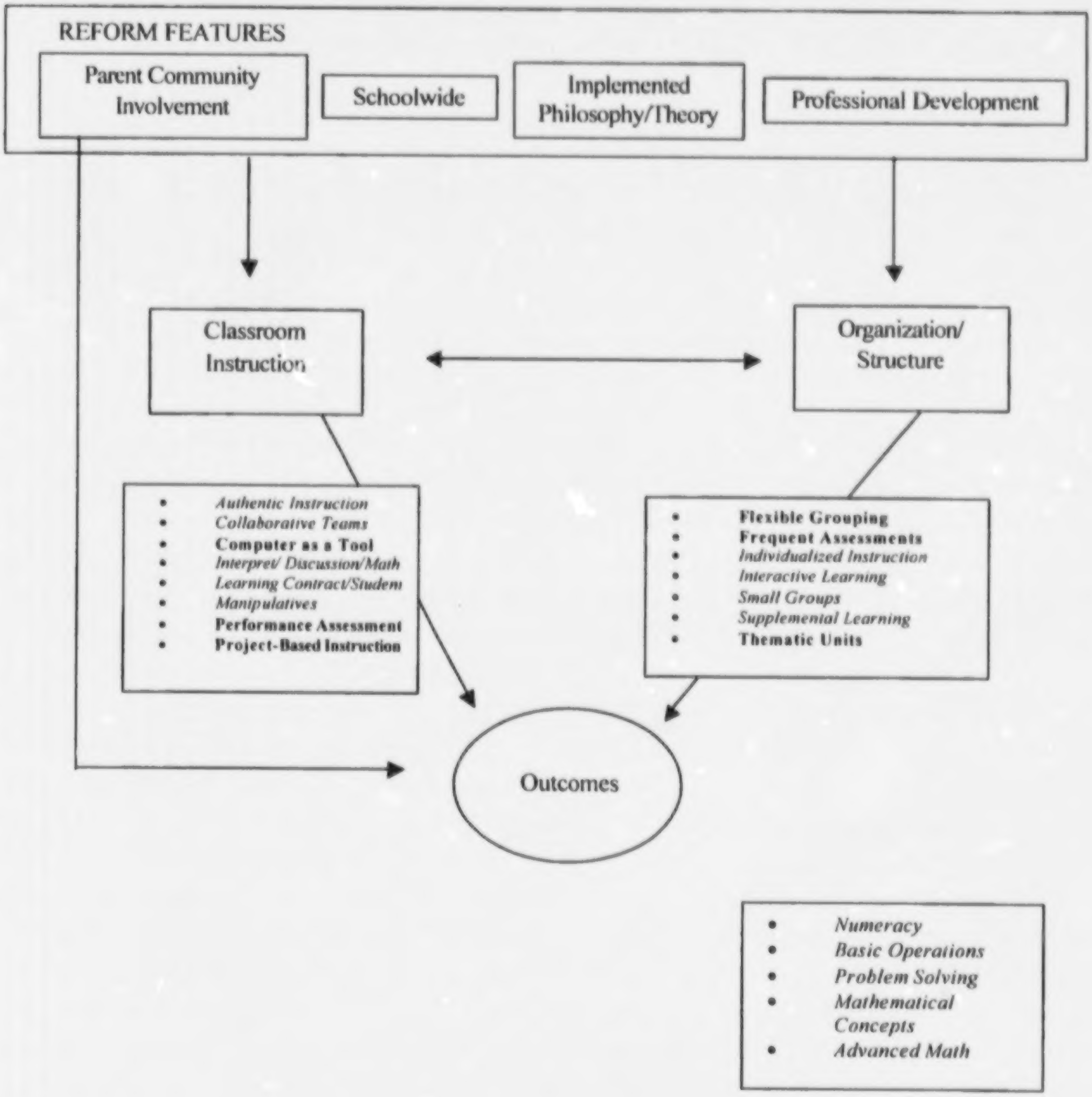

Existing School Theory/Philosophy
Schoolwide
Backmapping
Buy-in
Community Partnership
Formative Program Evaluation
Instructional Guidance
Leadership Contracts/School
Looping
Reform Team
Site-Based Management
Study Group/Teacher
Systematic Learning
Taking Stock
Implemented Theory/Philosophy
Professional Development
In-Service Workshop
On-Site Facilitator
On-Site Specialist
School-Site Training
Teacher Collaboration
Phonological Awareness
Standards-Based Instruction
Parent/Community Involvement
Learning Contact/Person
Parental Awareness
Parent Communication
Parent Volunteers
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referral
Improved Graduation
Achievement
Reading/Verbal
Math

Figure G.2
Modern Red Schoolhouse:
Reading/Language Arts Program Features



REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Computer as a Tool
Cultural Literacy
Learning Contract/Student
Performance Assessment
Project-Based Instruction
Collaborative Teams
Flexible Grouping
Frequent Assessment
Individualized Instruction
Interactive Learning
Small Group
Supplemental Learning
Thematic Units
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension
Composition
Critical Literacy
Advanced Language Arts

Figure G.3
Modern Red Schoolhouse:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Computer as a Tool
Interpret/ Discussion/Math
Learning Contract/Studen
Manipulatives
Performance Assessment
Project-Based Instruction
Flexible Grouping
Frequent Assessments
Individualized Instruction
Interactive Learning
Small Groups
Supplemental Learning
Thematic Units
Outcomes
Numeracy
Basic Operations
Problem Solving
Mathematical Concepts
Advanced Math

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H. School Development Program

The School Development Program was initiated in 1968 and first implemented in the New Haven, Connecticut, schools by James Comer and his colleagues at Yale University. The model addresses the concern that schools, especially those serving disadvantaged youth, do not meet all of the developmental needs of students—thus, those students are less likely to succeed in school. To address this concern, the model considers the range of developmental needs and broadens the schools' resource base to the entire community to meet these needs. The reform model focuses on community mental health, a holistic approach to child development, as well as on curriculum reform. Over time, the School Development Program has evolved into a national reform that balances community development, through outreach and mental health, with educational reform for urban elementary school children. The School Development Program remains distinctive among the reforms reviewed here because of the role given to the community and its focus on well-balanced child development.

The School Development Program (SDP) is a process-oriented, schoolwide reform that emphasizes child, adolescent, and adult development through teacher professionalism and community building. Students' holistic development and academic success are the primary goals of the program. To achieve this, the SDP process mobilizes parents, teachers, administrators, counselors, non-teaching staff, and community members.

The model posits that many students in inner-city schools come to school without the personal, social, and moral development necessary for academic success. If students' basic needs are met and they are challenged enough to do their best, these students have the potential for success. The program builds on the existing school programs to address six "developmental pathways": physical, psychological, language, social, ethical, and cognitive. The six developmental pathways are viewed as a whole—with each given equal importance to a child's development. The model advocates a balanced approach toward child development, and over-emphasis on one area at the expense of the others is considered to be potentially detrimental to a student's success in school. The model is a process-oriented reform that provides a structure and a philosophical framework for school restructuring. The reform features (Figure H.1) are summarized below.

Schoolwide Features

The model requires a school and district to use an "entry process" that includes extensive exploration of the School Development Program process, and to make specific time and resource commitments to the program. To ensure that new schools will receive adequate support both from SDP training centers and from the local school district, new schools are only accepted from districts that already have SDP schools or are part of a cluster of new SDP schools within a district.

The school establishes a *Reform Team* consisting of a district facilitator, the school principal, and may include teachers or parents. The *Reform Team* supports the initial reform implementation, including establishing a specific form of *Site-Based Management.*

The SDP model provides an SBM structure that incorporates three separate bodies that function together to develop and implement the reform activities at the school: The School Planning and Management Team (SPMT), the Student and Staff Support Team (SSST), and a Parent Team (PT). The SPMT has the primary responsibility for activities that drive the school's reform efforts, and the other groups are *Study Groups/School* that provide information and feedback to the work of the SPMT and initiate plans to address issues raised by the SPMT. The SSST is primarily concerned with the school's social climate, prevention issues, and at times manages individual student cases. The SSST is also charged with paying particular attention to the developmental pathways and how they are addressed in all reform activities. This group is composed of school faculty who have child development and mental health backgrounds. The PT is a *Parent Community/Group* that includes parent representatives and is primarily concerned with parental involvement in all aspects of the school. This group ensures that parent perspectives are included in the Comprehensive School Plan (see below).

The School Planning and Management Team is responsible for developing and enacting the Comprehensive School Plan, which directs the school's improvement efforts and is designed to address each of the following areas: student performance, curriculum and instruction, assessment, school climate, and parent and community involvement. The comprehensive school plan provides *Instructional Guidance* to the school. The SDP model provides training for schools on how to develop a "Balanced Curriculum"—in which schools study and take into account local and state standards when developing the comprehensive school plan, specific curriculum, and professional development.

In addition to tasks related to the comprehensive school plan, the SPMT creates a Staff Development Plan, which identifies and initiates professional development activities based on the comprehensive school plan. The SPMT also has the task of conducting the ongoing *Formative Program Evaluation,* which is used by the study groups to adapt the school's reform activities.

The SDP model seeks broad community involvement including *Community Partnerships* in the reform activities of the school. Adults both in the school and in the greater community are considered as resources for providing holistic, developmentally rich programs to ensure the academic success of students.

Implemented Theoretical/Philosophical Features

The School Development Model is strongly rooted in *Child Centered/Developmental* Learning Theories. The model's embedded theory of reform is that many students arrive at school at a different level of development than is assumed by traditional schools. Traditional school programs may not adequately address all of the developmental needs of the students, and students will be more likely to have academic failure. Great attention is given to the six developmental pathways in program development, review of curriculum and instruction, and professional development. Also important to the model are implemented philosophies of *Student Empowerment* and *Self-Extending System*. The model intends to create schools where as students developmental needs are met, they flourish as learners and directors of their own learning.

The activities of the Essentials for Literacy program, which targets students who are struggling in the acquisition of literacy skills, reflect an emphasis on *Whole Language*. This emphasis on learning reading through meaning and development of conceptual understanding is consistent with the developmental approach of the model.

The School Development Program's reform theories are rooted in *Teacher Professionalism*; the school is given tools and a framework through the SDP model by which to analyze and direct the progress and reform activities of the school. Like other process-oriented reforms, in recent years the model has increased its emphasis on specific instructional strategies including addressing curriculum alignment with standards and techniques recommended to address literacy skills. However the model, even in these efforts, relies upon teacher professionalism—schools may adapt existing materials, schools specify their own professional development plans, and sustainable change in the classroom is assumed to evolve from collegiality and collaboration rather than be imposed externally.

The School Development Program also strongly adheres to a theory of *Caring Community.* Combining the emphasis on holistic approaches to child development and building a community-based support system for the schools' and students' academic success creates an environment in which students are valued, respected, and nurtured. The model encourages schools to extend this view to the larger community in terms of providing services to meet family and community mental health needs.

Professional Development Features

Professional development features are highly important to the SDP Process, a characteristic of process-oriented models. Part of the school district's commitment to the SDP program is to designate a district person to be trained in the SDP process in order to serve as an *On-Site Facilitator* for the district SDP schools. The School Development Program offers a *Training of Trainers* program, in which the (district) on-site facilitator, the principal, and possibly a teacher and/or parent are trained at a national or regional SDP center in both the SDP process and in training and supporting the school's implementation of the model. In addition to the initial school training, to build teacher capacity to implement classroom reform activities professional development is provided throughout the year via *In-Service Workshops* in accordance to the Comprehensive School Plan.

Teacher Collaboration is considered vital to the process of improving student outcomes. The model supports these efforts by providing opportunities to collaborate and a specific reform process: "Teachers Helping Teachers." This process is designed to establish norms, attitudes, and procedures to encourage trust; to encourage reflection on practice and student work; and to promote classroom improvement through collaboration. The process includes *Peer Review/Observation.*

Parent/Community Involvement Features

More so than other models we have looked at, parent involvement features are most important to SDP. Parents are active in the development of the comprehensive school plan through *Parent Participation in Site-Based Management.* More communication is the key to involvement and both *Parent Awareness* and *Parent Communication* are important to the model. *Parent Volunteers* are highly encouraged in SDP schools. Indeed, this involvement is meant not only for parents, it also is meant to extend to the community surrounding the school. Since the model is based on theories of child development, *Advocacy, Health Care Assistance,* and *Support Services* are usually part of any SDP school.

Systemic Outcomes

The School Development Program provides schools with the opportunity to develop schoolwide or districtwide processes that address improvement in community support structures for children and families, as well as provides opportunities to develop classroom practices that promote classroom learning. These changes in the system as a whole have a logical linkage to improvement in *Attainment/Equity* (reduction in referral and retention) and *Achievement* (math and reading tests). The SDP model lacks specificity in terms of incorporation of classroom practices that are thought to link to specific reading and math outcomes. However, the reform process sets change strategies in motion that can help teachers, in collaboration with cooperating universities, to develop local opportunities that meet these challenges.

Reading/Language Arts Program Features

SDP is a process-oriented reform that places high emphasis on the home, the child's community, and *Teacher Professionalism*. The model's approach is based on the idea that in order for students to learn, not only the school and parents, but also the whole community must be united, involved, and committed to these children.

The SDP model is based on the idea that all students can achieve high levels of academic success. To help children achieve success, the model focuses on six developmental pathways: physical, psychological, language, social, ethical, and cognitive. The specific reform activities of the school, including instructional focus, are guided by the Comprehensive School Plan, and are developed with a holistic eye, balancing academic and social needs.

Because SDP is a process-oriented reform, it does not outline an explicit model for literacy instruction beyond its process for using local standards, including reading, to develop a balanced curriculum at the school or district level. It does, however, have a special program for students who fall behind in literacy. This program is called the Essentials of Literacy Process and may include pulling students out for enriched literacy instruction. The reading program features (Figure H.1) are described below.

Organizational/Structural Features

SDP does not provide a specific literacy model except for students who fall behind. If identified through *Diagnostic Procedures,* children go into a *Pullout Program* called the Essentials of Literacy Process, which features a classroom set up as a "Comer Reading Room." Within this program, students work in *Small Groups* at developmental workstations addressing different literacy skills. The school uses whatever reading materials it has, so these children could be working with *Basal Readers, Reading Canon* or *Trade Books*, depending on the school's resources. In addition to the Essentials of Literacy program, SDP schools may provide *Supplemental Learning* for students needing extra instruction.

Classroom Instructional Features

Again, because of the process-oriented approach of SDP, there is no set of classroom features that epitomize its language arts instruction. However, the SDP Essentials of Literacy Process is a specialized program for students with weak literacy skills. This program uses an enrichment approach that uses *Echo or Choral Reading*, and encourages fostering writing skills through *Essays, Creative Writing* and *Writing Mechanics*.

While an SDP school's reading program is not specified by the model, together the model's approach to literacy acquisition in the Essentials of Literacy Process, and its focus on child development give an indication of the types of reading program features a school using the model might adopt. *Performance Assessment* is encouraged as a means for measuring student learning as opposed to a sole reliance on standardized tests. The model's approach toward student empowerment suggests the use of any number of reading techniques within the program. *Collaborative Teams* might use *Pacing Oral Reading, Paired Reading*, or *Silent Individual Reading* as they build reading skills. Within these small groups, *Echo or Choral Reading* is a technique that may be used to help the students learn to read. A balanced literacy approach is likely one that encourages the development of writing skills through features such as *Essays* as a means for working on reading skills.

Reading/Language Arts Outcomes

Since there is no specific reading/language arts curriculum in the School Development Program, literacy outcomes are difficult to evaluate. However, the Essentials of Literacy Process, reading instruction methods focus on critical literacy outcomes for the children involved. SDP is a process-oriented model that mobilizes the home, school, and community to evaluate and address student needs and assess whether there is success in meeting these needs. This mobilization can be powerful. The attention to academic needs and performance, and creating a balanced curriculum suggest a strong linkage to the literacy/language arts outcome. However, the degree of linkage (tight or loose) will depend on local classroom practices, as enhanced by SDP.

Math Program Features

The SDP math program features (Figure F.3) are described below.

Organizational/Structural Features

Although the program provides extensive information and guidance schoolwide, parental/community involvement, and professional development features, it does not specify particular organizational features for math. Based on the individual school's comprehensive plan, with input on developmental pathways, schools may incorporate *Small Groups, Individualized Instruction* and *Supplemental Learning* depending on the students' needs. *Performance Assessments* are used to identify the students that fall behind and to develop new strategies for instruction. Each school's program will be tailored to the identified needs of the students in that school.

Classroom Instruction Features

As a process-oriented reform, SDP does not provide specific instructional methods for in-class practices. However, the model stresses that *Performance Assessments* are important to measure students' success. Based on SDP's learning theories and focus on holistic development, various instructional features are suggested and included, to give an indication of what instructional programs of SDP schools may look like. *Collaborative Teams* may be used to encourage interactive learning among students. To challenge students to try their best and to add relevancy, *Authentic Instruction* may be used. Depending on the school and developed curriculum, *Manipulatives* and *Worksheets/Workbooks* may also be used to stimulate student learning.

Math Outcomes

Since the program does not provide a specific approach to mathematic instruction, outcomes of the School Development Program are hard to measure. Mathematic outcomes partly depend on the existing school program, since SDP builds upon it. The focus on developing a balanced curriculum suggests schools will consider local and state standards when developing their math program. The high emphasis of the program on building a strong community increases parent involvement in the education of the students. The effects of these communities' building processes on mathematic instruction and outcomes are not clear.

Figure H.1
School Development Program:
Reform Program Features

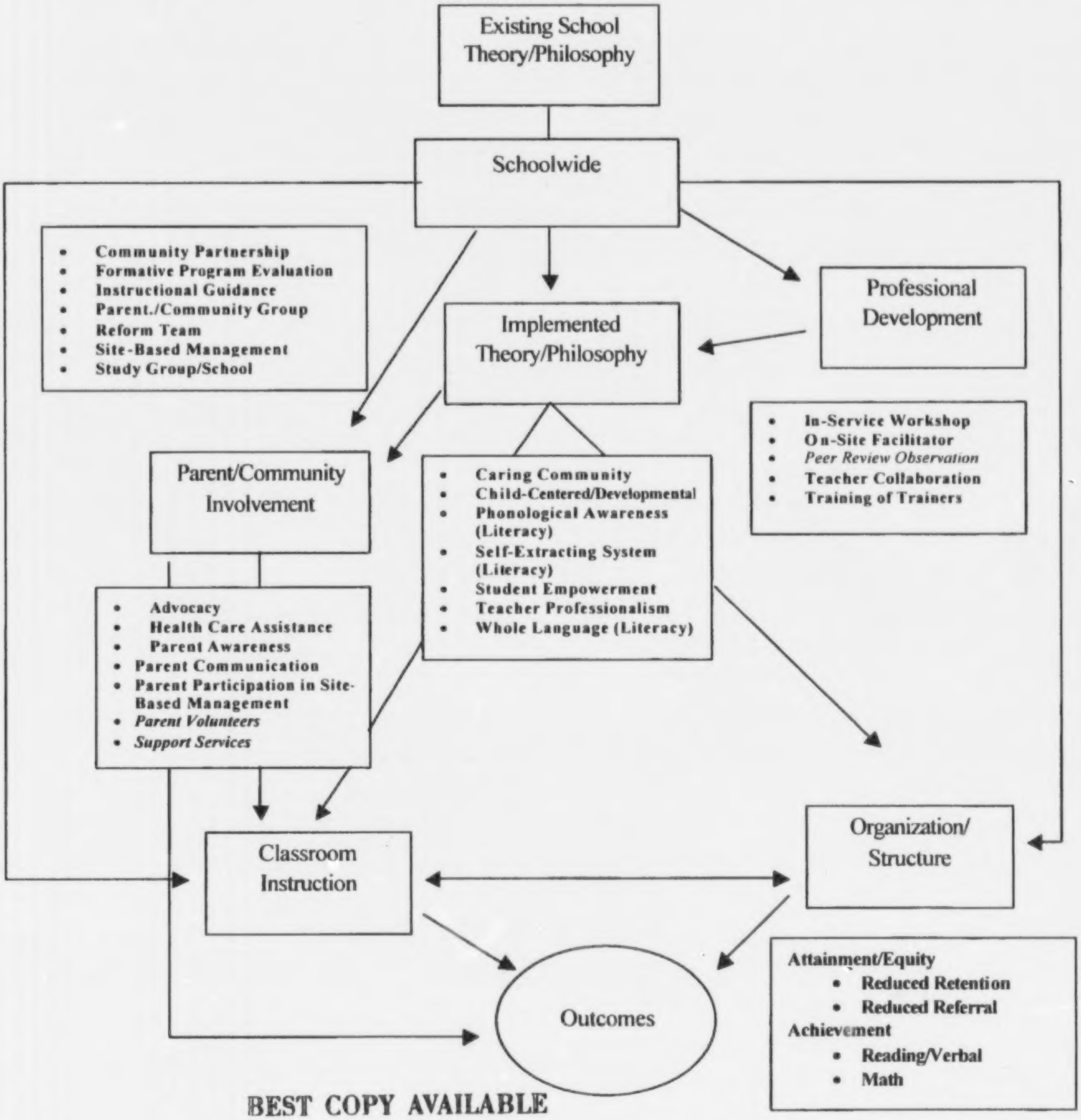

Existing School Theory/Philosophy
Schoolwide
Community Partnership
Formative Program Evaluation
Instructional Guidance
Parent./Community Group
Reform Team
Site-Based Management
Study Group/School
Professional Development
Implemented Theory/Philosophy
In-Service Workshop
On-Site Facilitator
Peer Review Observation
Teacher Collaboration
Training of Trainers
Parent/Community Involvement
Caring Community
Child-Centered/Developmental
Phonological Awareness (Literacy)
Self-Extracting System (Literacy)
Student Empowerment
Teacher Professionalism
Whole Language (Literacy)
Advocacy
Health Care Assistance
Parent Awareness
Parent Communication
Parent Participation in Site-Based Management
Parent Volunteers
Support Services
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
Reduced Retention
Reduced Referral
Achievement
Reading/Verbal
Math

Figure H.2
School Development Program:
Reading/Language Arts Program Features

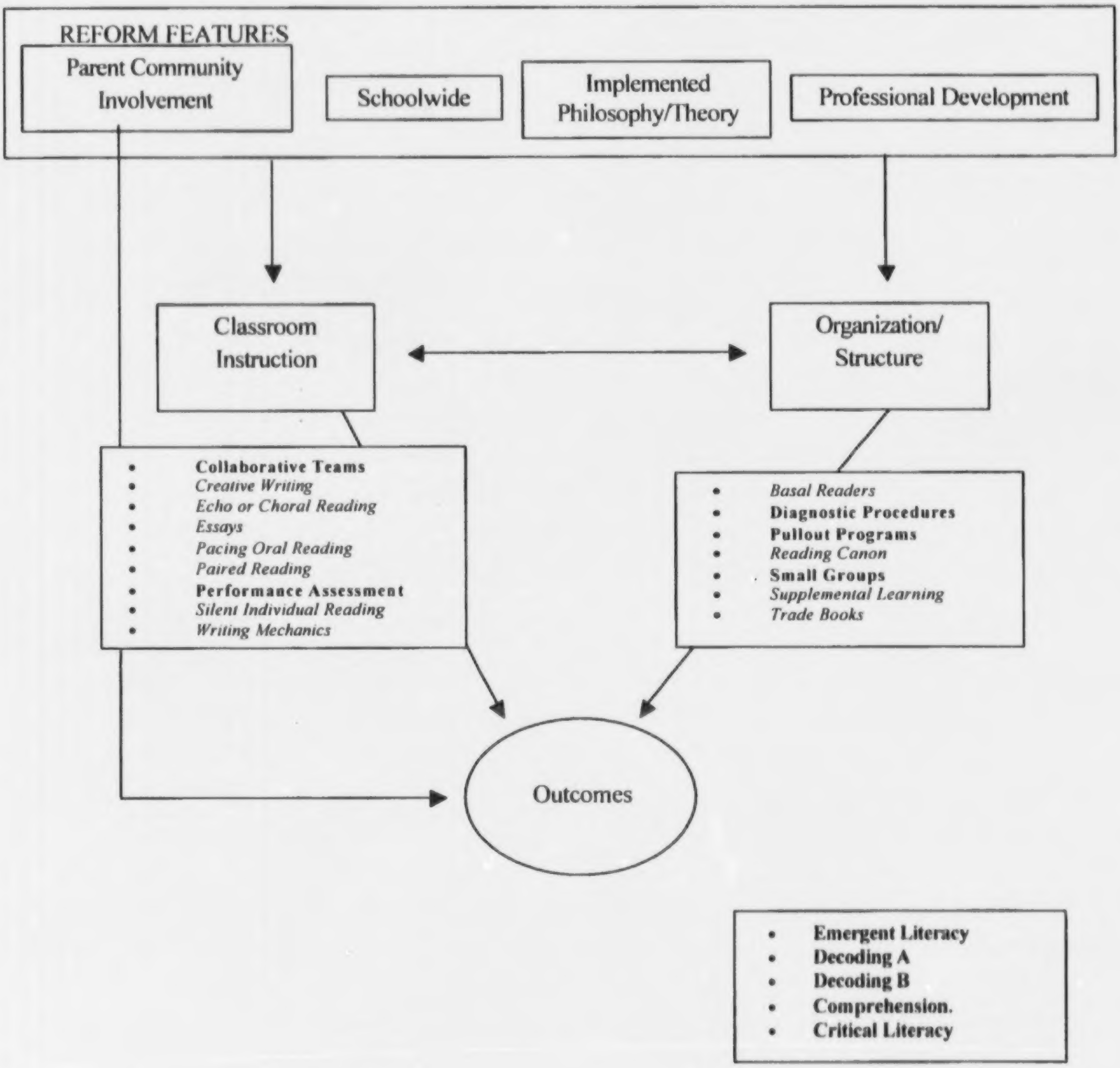
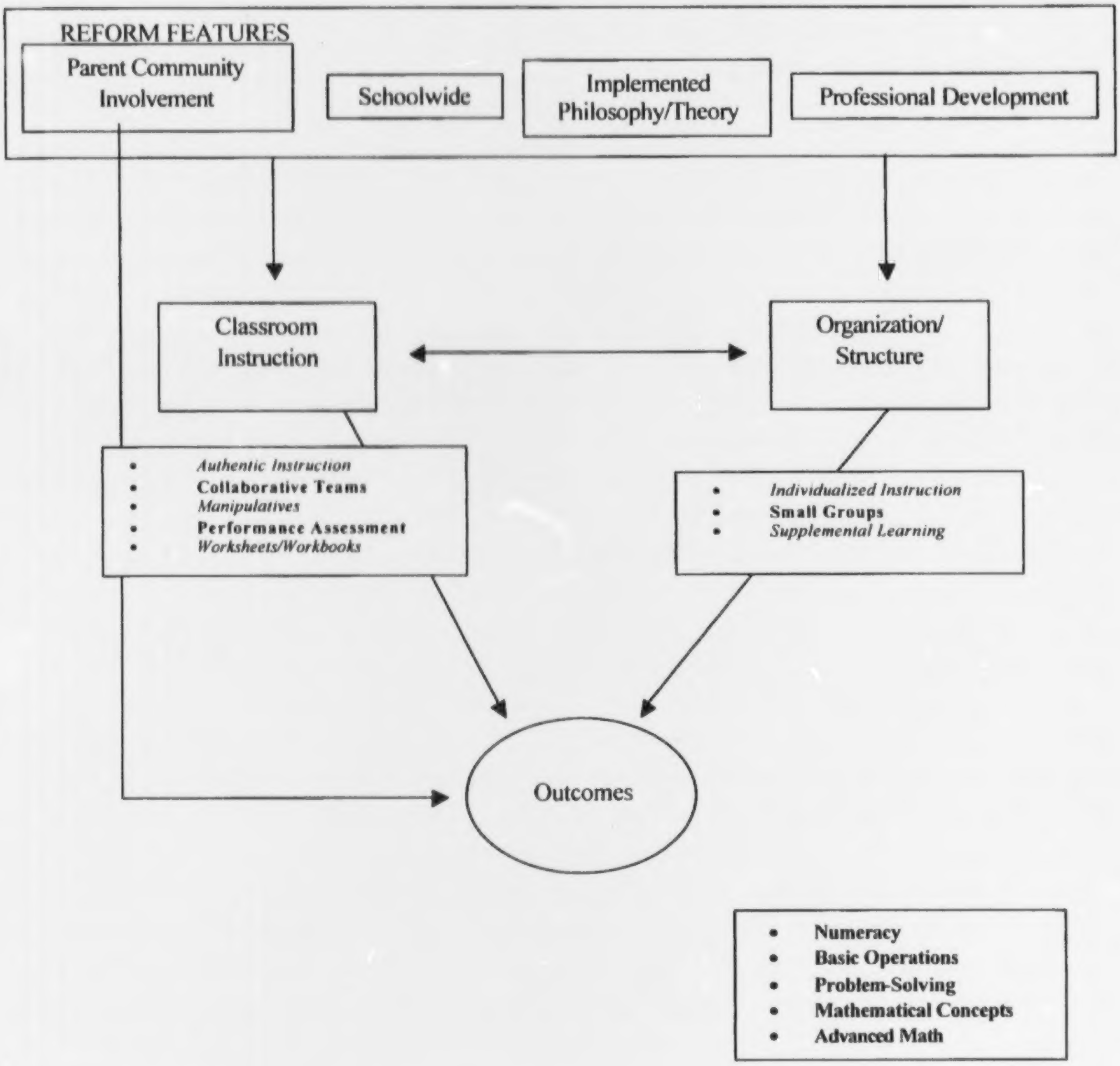

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Collaborative Teams
Creative Writing
Echo or Choral Reading
Essays
Pacing Oral Reading
Paired Reading
Performance Assessment
Silent Individual Reading
Writing Mechanics
Basal Readers
Diagnostic Procedures
Pullout Programs
Reading Canon
Small Groups
Supplemental Learning
Trade Books
Outcomes
Emergent Literacy
Decoding A
Decoding B
Comprehension.
Critical Literacy

Figure H.3
School Development Program:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Collaborative Teams
Manipulatives
Performance Assessment
Worksheets/Workbooks
Individualized Instruction
Small Groups
Supplemental Learning
Outcomes
Numeracy
Basic Operations
Problem-Solving
Mathematical Concepts
Advanced Math

School Development Program
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I. Success for All

Reform Program Features

Success for All was initially developed as a comprehensive, schoolwide program focusing on reading with the goal of all students reading on grade level by the third grade. The program was developed specifically for schools with high concentrations of at-risk youth where reading levels have traditionally lagged, with students often falling significantly below grade level upon entering middle school. The program has now expanded to include other subject areas including math (i.e. Math Wings) and social studies and science (i.e. World Lab). A school may implement any of the programs or all three: Success for All (reading), Math Wings, and/or World Lab.

Success for All (SFA) is the only reform model in this review that provides both a curriculum and specified instructional methods. SFA combines a tightly structured program designed to provide students with a specific curriculum. It requires that instructional practices be implemented in a uniform manner across the school to provide students with a consistent and well-articulated approach to learning. The model incorporates a form of cooperative learning that is intended to promote collaboration among students of varied abilities and encourage more equal outcomes than do traditional methods.

The model is a curriculum and instruction model in which the structure, content, instructional methods, and related structures of the school are prescribed. While there may be some room in the design for customizing the program to the school, unlike the more process-oriented reform models, Success for All when implemented should look very similar in most schools. SFA's program features (Figure I.1) are described below.

Schoolwide Processes

Implementation of Success for All involves several schoolwide features. A school must work through an exploration and *Buy-In* process to decide if the program fits with the philosophy of the school and to determine if the faculty has the level of commitment necessary to implement the program. Prior to implementation, the school establishes a *Reform Team* to work with the Success for All specialist and facilitator to provide the training and implementation of the program to the school.

The instructional materials, methods for student assessment and assignment to groups, and the coordinated teaching methods provide *Systematic Learning* to the school. This feature ensures there are instructional links between the learning goals and student outcomes, and that there will be uniformity between them. Moreover, the systematic learning intends to build a sense of community in the school with all working together as a team in a coordinated effort.

A *Parent/Community Group* is established at the school to address the issue of parent and community involvement, as well as student-related issues that are of concern to parents and the community. This group has two functions. First it ensures that parents and the community are brought into the reform effort, allowing an avenue to raise issues to the school's reform team. Second, it provides outreach programs to meet needs identified by the group, such as improving student attendance.

Implemented Theory/Philosophy

The Success for All early reading program intends to build on both *Phonological Awareness* and *Whole Language*. The students are frequently assessed and assigned, or reassigned, to groups according to ability, and given leveled materials and instruction based on those groupings. The math program is based on *Concept Development* with an emphasis on organizing content around conceptual themes. The math program curriculum integrates *Thematic Teaching* to promote fluency in math.

Success for All bases its structure of reform on the theory that change in student outcomes will result from changing teachers' practice, and subscribes to a very specific form of teacher's practice. The model design links the *Prescribed Curriculum* to the *Prescribed Teacher Practices* as a total package to lessen the degree of variation in implementation and to ensure that change in teacher practice will occur. As in any prescribed model success of the program relies upon fidelity of implementation.

Professional Development

Because the process involves a great number of changes in the classroom, the initial year of implementation requires a great investment in professional development. Before the year starts, a *School-Site Training* is held to train the school staff in the model. Additional *In-Service*

Workshops are given during the school year to assist teachers with building the capacity to implement Success for All in their classrooms.

Each school has an *On-Site Specialist* and an *On-Site Facilitator,* who spend time at the school regularly to provide support, conduct classroom observations, and evaluate program implementation. The specialist may facilitate *Peer Review/Observation/Math* instruction. Professional Development also includes *Networking* opportunities with schools at regional and national conferences.

Parent/Community Involvement

To make sure that parents are involved from the onset, there is *Parent Participation in Reform Team*. To increase parent involvement, Success for All uses *Parent Awareness* activities to inform parents about the program, instructional methods, and ways they may participate in the school, such as opportunities for *Parent Volunteers*.

Parents are asked to become direct participants in the reform efforts of the school through several features that require coordinated efforts between the school and the home. Regular direct contact is made through *Parent Communication* to update the parents on students' performance, and to let the parents know in advance the work students will have been assigned. Parents are also given *Parent Instructional Training*, so that time at home doing *Paired Reading* will model and supplement the classroom instruction.

Systemic Outcomes

Success for All is a comprehensive and systemic approach to early reading that has a strong confirmatory research base. Thus, the program has strong linkages to early *Attainment/Equity* (reduction in referral and retention) and a tight linkage to improvement in *Achievement/Reading*. The math component is currently being tested in the field and could also develop confirmatory research documenting links to *Achievement/Math.* Success for All does not include classroom practices that link directly to Minnesota's inquiry standards.

Reading/Language Arts Program Features

Success for All is a comprehensive school restructuring process designed for schools with large populations of students at risk for learning failure. Success for All is a skills-oriented instructional approach. It is a systematic intervention, with the structures explicitly in place, although teachers and schools have the opportunity to make some adjustments. The features of the SFA reading program (Figure I.2) are described below.

Organizational/Structural Features

The numerous structural features of Success for All enable the systematic coverage of a broad range of activities. The *Ability Grouping* structure is designed to enable teachers to provide *Interactive Learning* with some customized instruction without relying too heavily on *One-on-One Tutoring*. Students spend time daily reading in *Small Groups* with reading teachers and tutors. First-grade students who are struggling to succeed are given tutoring priority.

The *Literacy Rich Environment* and *Trade Books* are included to foster a love of reading and to provide a meaning-oriented component that supplements some of the skills-oriented activities that often are used in context with *Basal Readers* for younger children. For older children, *Trade Books* are used.

Children in the program are carefully monitored with *Ongoing Written Observations*, and regularly tested using *Diagnostic Procedures* and *Frequent Assessment* in order to regroup students based on their progress and so that the school communities know how effective instructional methods are.

Classroom Instruction Features

Success for All uses numerous classroom instructional features that range from *Worksheets/Workbooks* and *Reading Drills* to *Creative Writing* and *Drama*. Success for All is designed with the idea that a great variety of activities is needed to ensure near-universal success. Accordingly, meaning-oriented and phonics-oriented instructional features are combined.

As a part of its intent to reach every child, the features also include *Multisensory Activities* and an emphasis on writing. *Writing Mechanics* are emphasized at all levels, but in older grades, *Advanced Writing Mechanics* are used. *Paired Reading* and *Pacing Oral Reading* are used in younger grades, but in older grades *Silent Individual Reading* takes precedence in the classroom The idea is to keep children constantly engaged in literacy activities.

Other classroom features include *Interpreting/Discussion/Reading, Meaning Context/Predicting, Storytelling, Big Books, Collaborative Teams*, and *Writing Mechanics*. The lessons themselves are broken into short segments of five to ten minutes each. Many lessons are *Highly Scripted Lessons*. *Cooperative Learning* strategies are prevalent throughout the activities.

Reading/Language Arts Outcomes

Success for All is a schoolwide reform model and as such, its intended outcomes are diverse and comprehensive. Its stated goal is to ensure that all children succeed the first time. In the same vein, it aims to reduce retention and referrals to special education.

Because it includes kindergarten (in some cases, a full-day kindergarten) and provides systematic coverage of a broad range of reading skills in grades, the program is designed to affect emergent literacy, both types of decoding (context-free and meaning-oriented), and comprehension.

The program appears to have little in place to foster critical literacy, which is the interaction between comprehension of new content and metacognition, or the ability to organize and think about new ideas learned through reading.

Success for All is highly prescribed and has been widely researched. Therefore, specific literacy outcomes are quite apparent. Success for All can affect *Reading Readiness (Emergent Literacy), Decoding A and B, Comprehension,* and *Composition.*

Math Program Features

The math program is part of a comprehensive schoolwide reform approach called "Roots & Wings." The Math program is designed to provide a practical and successful application of constructivist mathematics instruction in schools that have a large population of students at risk for learning failure.

Math Wings emphasizes the improvement of instructional strategies of all teachers, using well-structured student materials and extensive teacher training. The program is designed to be aligned with the principles of The National Council of Teachers of Mathematics. It offers a balance of solid mathematical conceptual development, problem solving in real-world applications, and development of necessary mathematics. The Math program was developed on the experiences of "Success for All" and, in most cases, they have common characteristics.

The program, prepackaged at the national level, requires unity of personnel during the adaptation and implementation process. Faculty must be willing and able to complete the required training and work with the *On-Site Facilitator*. SFA's math program features (Figure I.3) are described below.

Organizational/Structural Features

The features in this category of math program facilitate the use of wide-ranging activities. *Thematic Units* are designed to enable students to focus on specifics of the subject, while keeping the subject matter meaningful to students.

Heterogeneous Groups, *Small Groups,* and *Interactive Learning* create an environment that enables students to support one another's learning. Routine skill practices increase students' math fluency. *Individualized Instruction* through *Supplemental Learning* and in-class instruction is available for students needing additional work in specific skill areas.

Students are given *Diagnostic Procedures* and learning progress is monitored with *Ongoing Written Observations* and *Frequent Assessments*, so that interested parties are informed about the effectiveness of the instructional methods used. *Remedial Methodologies*, such as *Individualized Instruction* for those students who are behind their peers, are also used to make sure that students do not fall behind.

Classroom Instruction Features

The SFA/Math program was designed with the idea that various activities are needed to reach every child and to ensure their success. *Manipulatives* are emphasized throughout the classroom instruction to facilitate *Problem-Solving* activities.

Calculator as a Tool is used as an aid to help students go beyond the calculation process to developing math concepts. The program uses *Cooperative Learning, Collaborative Teams, and Interpreting/Discussion* to develop math fluency.

SFA uses *Highly Scripted Lessons,* structured and organized into three segments. Fifteen minutes at the beginning of each class period is devoted to review of the concepts and introduction of new concepts for the day. For the next forty minutes, students are engaged in problem-solving activities, either individually or in teams. The last five minutes is used for reflection, math journals, handouts, and *Worksheets/Workbooks.*

Math Outcomes

Roots and Wings includes instructional and organizational/structural features that link directly to *Numeracy*, *Basic Operations*, and *Math Concepts*.

Figure I.1
Success for All:
Reform Program Features

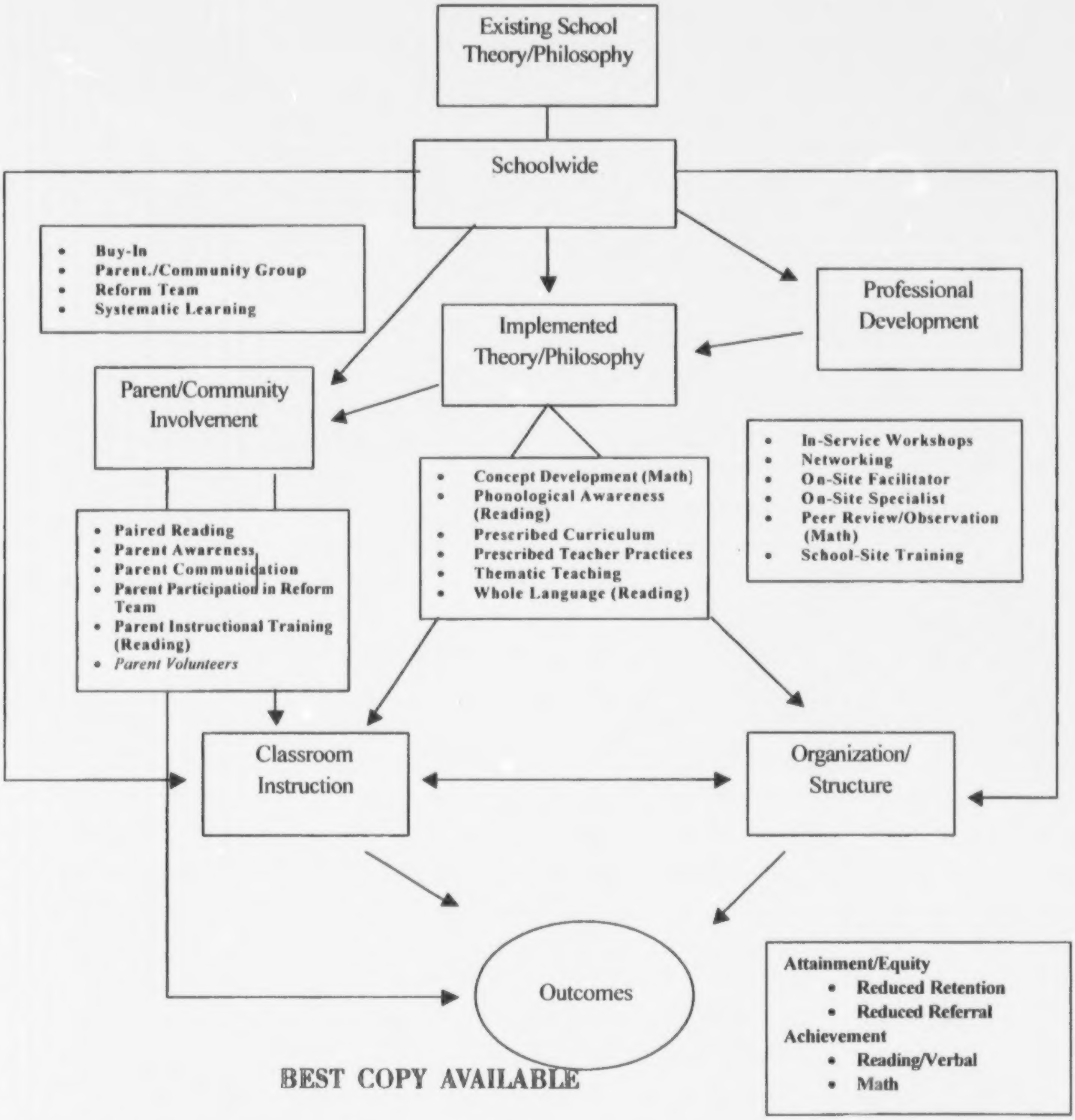

Existing School Theory/Philosophy
Schoolwide
• Buy-In
• Parent./Community Group
• Reform Team
• Systematic Learning
Professional Development
Implemented Theory/Philosophy
Parent/Community Involvement
• In-Service Workshops
• Networking
• On-Site Facilitator
• On-Site Specialist
• Peer Review/Observation (Math)
• School-Site Training
• Concept Development (Math)
• Phonological Awareness (Reading)
• Prescribed Curriculum
• Prescribed Teacher Practices
• Thematic Teaching
• Whole Language (Reading)
• Paired Reading
• Parent Awareness
• Parent Communication
• Parent Participation in Reform Team
• Parent Instructional Training (Reading)
• Parent Volunteers
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
• Reduced Retention
• Reduced Referral
Achievement
• Reading/Verbal
• Math

Figure I.2
Success for All:
Reading/Language Arts Program Features

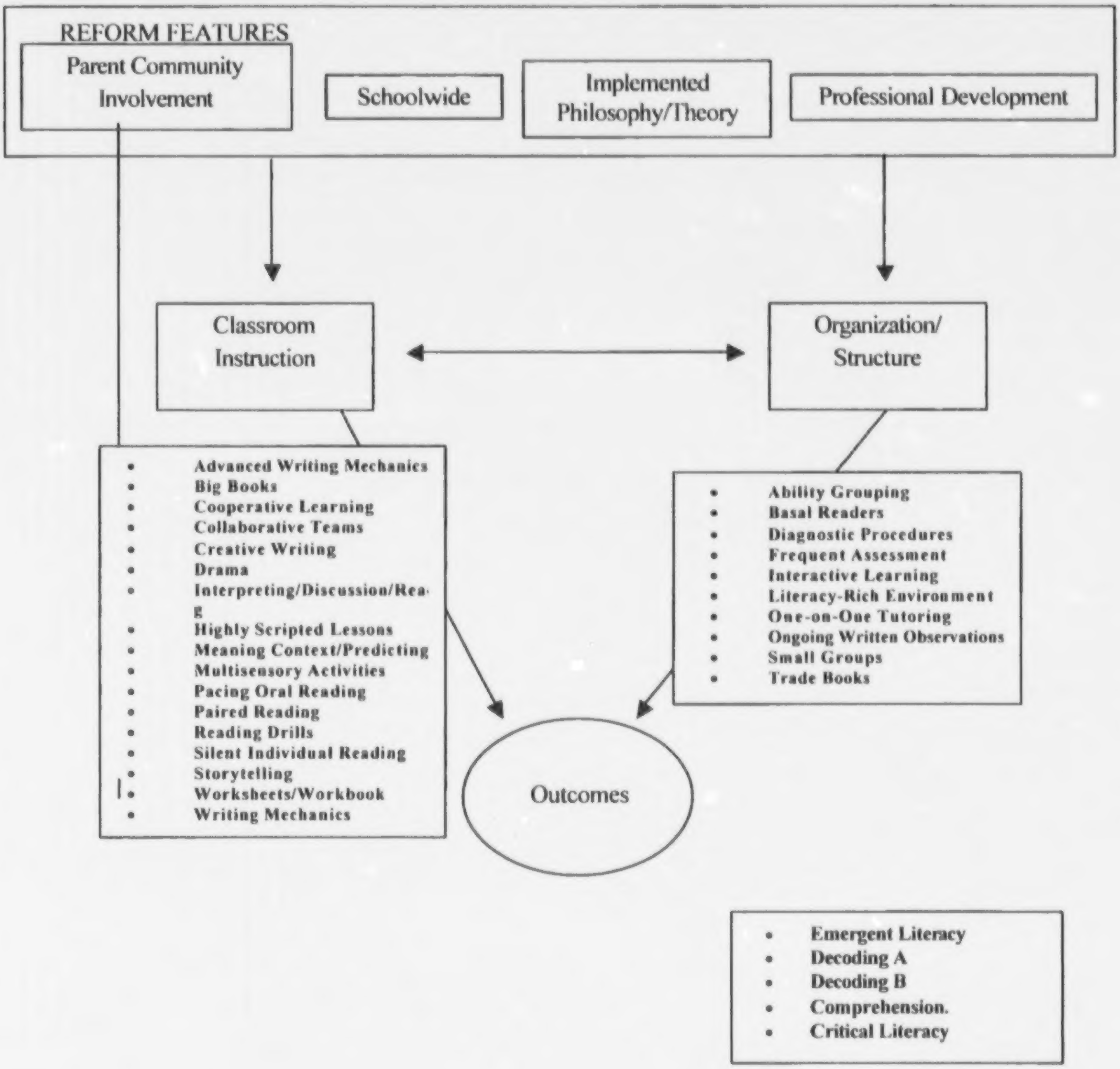
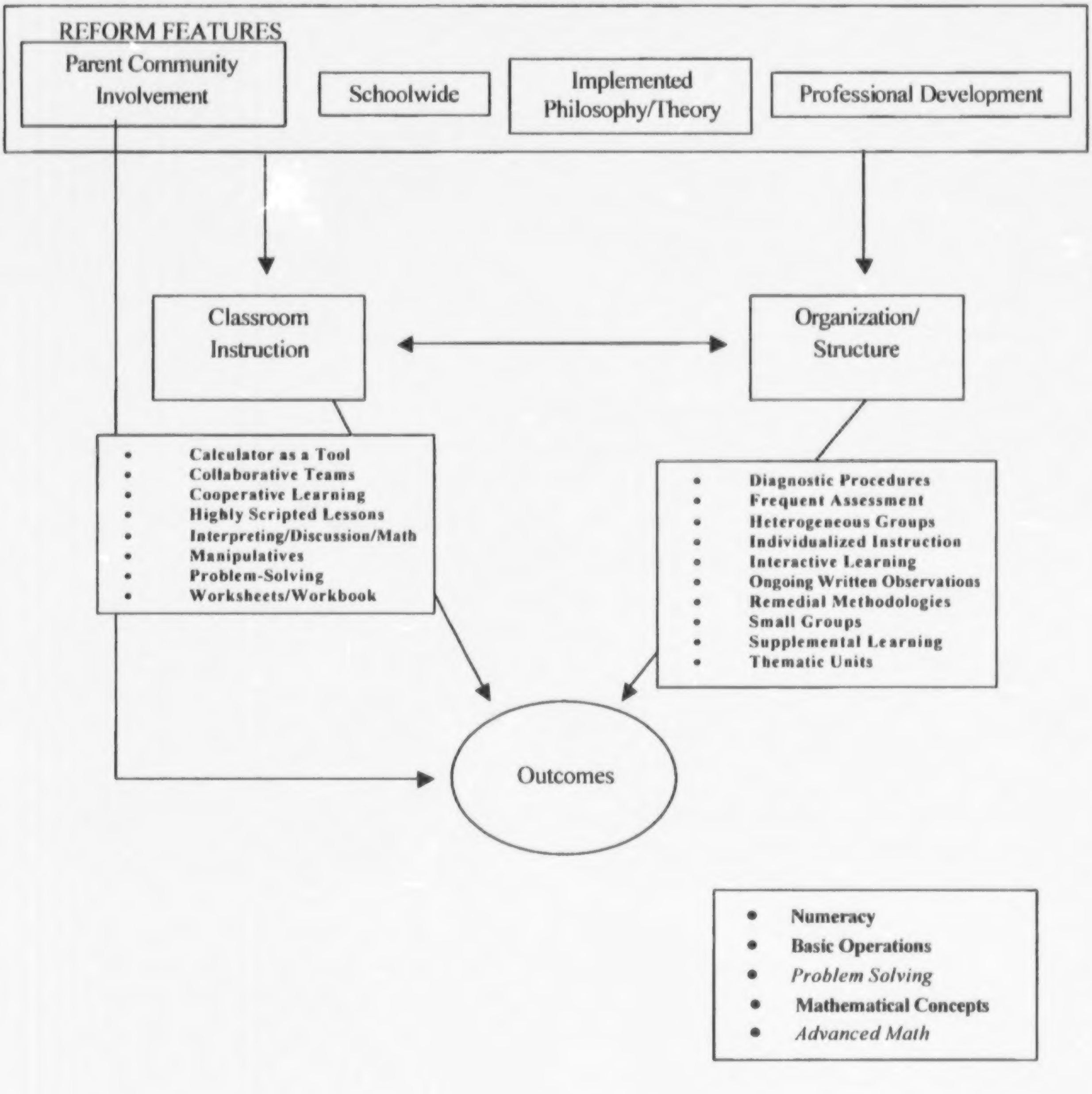

REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
• Advanced Writing Mechanics
• Big Books
• Cooperative Learning
• Collaborative Teams
• Creative Writing
• Drama
• Interpreting/Discussion/Reag
• Highly Scripted Lessons
• Meaning Context/Predicting
• Multisensory Activities
• Pacing Oral Reading
• Paired Reading
• Reading Drills
• Silent Individual Reading
• Storytelling
• Worksheets/Workbook
• Writing Mechanics
• Ability Grouping
• Basal Readers
• Diagnostic Procedures
• Frequent Assessment
• Interactive Learning
• Literacy-Rich Environment
• One-on-One Tutoring
• Ongoing Written Observations
• Small Groups
• Trade Books
Outcomes
• Emergent Literacy
• Decoding A
• Decoding B
• Comprehension.
• Critical Literacy

Figure I.3
Success for All:
Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
• Calculator as a Tool
• Collaborative Teams
• Cooperative Learning
• Highly Scripted Lessons
• Interpreting/Discussion/Math
• Manipulatives
• Problem-Solving
• Worksheets/Workbook
• Diagnostic Procedures
• Frequent Assessment
• Heterogeneous Groups
• Individualized Instruction
• Interactive Learning
• Ongoing Written Observations
• Remedial Methodologies
• Small Groups
• Supplemental Learning
• Thematic Units
Outcomes
• Numeracy
• Basic Operations
• Problem Solving
• Mathematical Concepts
• Advanced Math

Success for All
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J. Talent Development Career Academies

Reform Program Features

The Talent Development Model was designed to motivate students by teaching them college preparatory courses through different lenses or "career academies." In the ninth grade, students take an inventory test to help them decide which career academy they will be in for the remainder of high school. The career academies are organized as *School-Within-a-School,* with separate faculty, administration, and facilities for each academy. Each academy has a career-related theme, determined by the faculty, and develops coursework related to that theme.

Teacher relationships with students are brought to the forefront in this model. To help develop the student/teacher relationship, students are given the same homeroom teacher in Grades 10, 11, and 12. Teachers are encouraged to see their role as a coach, mentor, advisor, advocate, and tutor rather than a transmitter of knowledge to students.

The Talent Development Model uses block scheduling, and all students take a core, college preparatory curriculum. The model believes that all students are capable of succeeding in a program that will prepare them to be ready for college and provides a support network to enable struggling students to succeed. Whether the student is planning on going to work, community college, or a four-year college, all are held to high standards. Should a student fall behind, the Talent Development Model has several recovery methods to help students succeed. The program features included in the Talent Development model (Figure J.1) are described below.

Schoolwide Features

The Talent Development or Career Academies Program includes a *Buy-In* process that engages the school community in a study of the program. The model includes *Community Partnerships* that are linked into *Schools-Within-a-School*, creating career-oriented community linkages. The faculty seeks input from the partnership to develop curriculum and work opportunities for students. The high school model uses an *Upper/Lower Division* with a ninth-grade transitions program and the upper-grade career academies that provide *Specialized Courses of Study.*

The TDCA model establishes a *Reform Team* to plan and implement the model. To foster the necessary autonomy for developing and implementing the program, the model uses *Site-Based Management*.

Study Groups/Teacher design the curriculums, both the college preparatory core curriculum and the career focus programs. Each year, a *Formative Program Evaluation* is conducted to provide feedback to the school to guide program refinement.

Implemented Theoretical/Philosophical

The TDCA model emphasizes *Acceleration* of learning for all children. Further, *Reflective Practices* and *Teacher Professionalism* are encouraged as means of promoting adaptability. Further, the academies approach emphasizes building a *Caring Community* within each academy. These philosophies suggest a balance between systematic and process-oriented approaches.

Professional Development Features

Professional development features are quite important to the Talent Development Model. *School-Site Training* teaches each school how to implement the model and an *On-Site Specialist* visits the school frequently to ensure the proper implementation of the model and provide resources to teachers who are striving to improve their classroom methods. This support often includes expert modeling—with the specialist teaching in a classroom and establishing a network within the school for *Peer Review/Observation. In-Service Workshops* and *Networking* provide addition training and support to teachers. Extensive *Teacher Collaboration* is required in the development of the curriculum.

Parent Involvement Features

Parent involvement is another very important part of the Talent Development Model. Both *Parent Communication* and *Parent Awareness* are integral to the model.

In addition to keeping parents informed about things happening within the school, the Talent Development Model seeks to improve the lives of the students outside of the school. It is the belief of the model that healthy and happy students are better achievers in school. Therefore the model works to provide *Support Services, Health Care Assistance,* and *Advocacy*, when possible, to advance the lives of its students.

Systemic Outcomes

The TDCA model provides a systematic, yet adaptable, process that logically links to movements in *Attainment/Equity* (reduction in retention and referral, and gain in graduation rates), as well as gains in *Achievement* (math and verbal). This model may be subjected to further confirmatory research in the future.

Reading/Language Arts Program Features

The reading/language arts program features (Figure I.2) for the Talent Development model are described below.

Organizational/Structural Features

The Talent Development Model is a program based on specialized courses of study organized around specific career areas. These features are used to make the education relevant to the students within the context of each career academy. Students often work in *Small Groups* and engage in *Peer Tutoring*. The model uses *Flexible Grouping* within the classroom to place the students in different groups and encourages the use of *Heterogeneous Groups*. *Diagnostic Procedures* are used to measure student success.

Should a student fall behind, several types of *Supplemental Learning* features are available, including the Twilight School (a program for students with attendance problems), after-school tutoring, and summer enrichment. Another strategy is to provide *Double Periods* of English for students diagnosed as needing help. These various ways of helping are not aimed at remediation but rather at acceleration. Within each of the support mechanisms, a wide variety of organizational/structural features may be used, and can run the gamut from *Individualized Instruction* to *Peer Tutoring*.

The Talent Development Career Academy *Lower/Upper Division* ninth graders (lower division) take transitional courses. Students with weak reading skills in this division often take *Double Periods/English*. The Upper Division career academies use *Thematic Units* to make the core curriculum more relevant.

Classroom Instructional Features

Because the Talent Development Model is based on career academies that are developed by teachers according to their interests and talents, the classroom/instructional features can be different not only from school to school but also within a single school. However, there are some features that all Talent Development schools share. At the core of the model is providing classroom instruction that is relevant and interesting to the students within the career academies. This concept is congruent with *Authentic Instruction*. Within the classroom, *Collaborative Teams* are encouraged. The Talent Development model recommends various features consistent with an enriching approach for students found deficient by *Performance Assessments*. The feature *Computer as a Tool* is often used to help students with lessons in which they are having difficulties.

Although direct evidence of certain features could not be found, features such as *Writing Mechanics, Advanced Writing Mechanics, Essays*, and *Journals* would be highly likely to show up due to the emphasis on college preparatory courses.

Reading/Language Arts Outcomes

Because there is not a prescribed program for literacy/language arts instruction, specific early reading outcomes cannot be determined. However, implementation of the Talent Development Model can provide increased math and writing scores (*Composition*). In addition, improvement in school climate, student attendance, student promotion rates, and increase in students on track for graduation in Talent Development schools has been shown. These improvements can have indirect effects on reading/language outcomes. In addition, the academies approach should strengthen *Advanced Language Arts* skills upon graduation.

Math Program Features

The math program features for the Talent Development model (Figure J.3) are described below.

Organizational/Structural Features

In Talent Development high schools, the relevancy of student learning is important. Thus, the program uses *Thematic Units* related to the specialized courses of study according to students' interest and career goals. *Flexible Grouping* and *Heterogeneous Groups* are used in classroom organization to place students in *Small Groups*, *Individualized Instruction*, *One-on-One Tutoring*, or *Peer Tutoring* groups.

Frequent Assessments are vital for the program to provide feedback on whether students meet the standards or not. *Supplemental Learning* is used to address students' math learning and attendance problems (i.e. Twilight School, summer schools, and after-school tutoring). In Talent Development middle schools, students needing extra help in mathematics participate in the Computer-and-Team-Assisted Mathematics Acceleration (CATAMA) course. This course is a combination of computer-assisted instruction and structured collaborative groups. CATAMA also replaces an elective course for part of the school year. This course serves a large number of students and has low costs associated with it.

The Talent Development model uses an *Upper/Lower Division* structure, with a ninth-grade transition program and the upper-grade career academies. The school's ninth-grade transition program may include *Double Periods* of math for students needing additional math instruction. The model also provides *Supplemental Learning* opportunities for students at all grade levels.

Classroom Instruction Features

Since each career academy uses different learning techniques, there is not a tangible set of features that is applicable for all of the academies. However, at the middle-school level, the program emphasizes hands-on learning, *Manipulatives*, and *Computer as a Tool*. Both at the middle-school and the high-school levels, *Collaborative Teams* are frequently used in combination with methods incorporated to increase student interest and relevancy of math work, such as *Authentic Instruction* and *Interpreting/Discussion/Math*. *Performance Assessments* and *Project-Based Instruction* are encouraged, as is *Problem-Solving*. The program encourages technology use; students also use *Calculator as a Tool* for instruction, while *Computer Assisted Instruction* is provided at the middle-school level.

Math Outcomes

Because Talent Development High Schools have different academies, not all math-related outcomes are measurable. However, all students have to take a core curriculum in math. The Talent Development program includes instructional and organizational/structural features directly related to *Basic Operations*, *Problem Solving*, *Mathematical Concepts*, and *Advanced Math*. Also, an increase in graduation rates and an improvement in school climate and student attendance have been shown.

Figure J.1
Talent Development Career Academies:
Reform Program Features

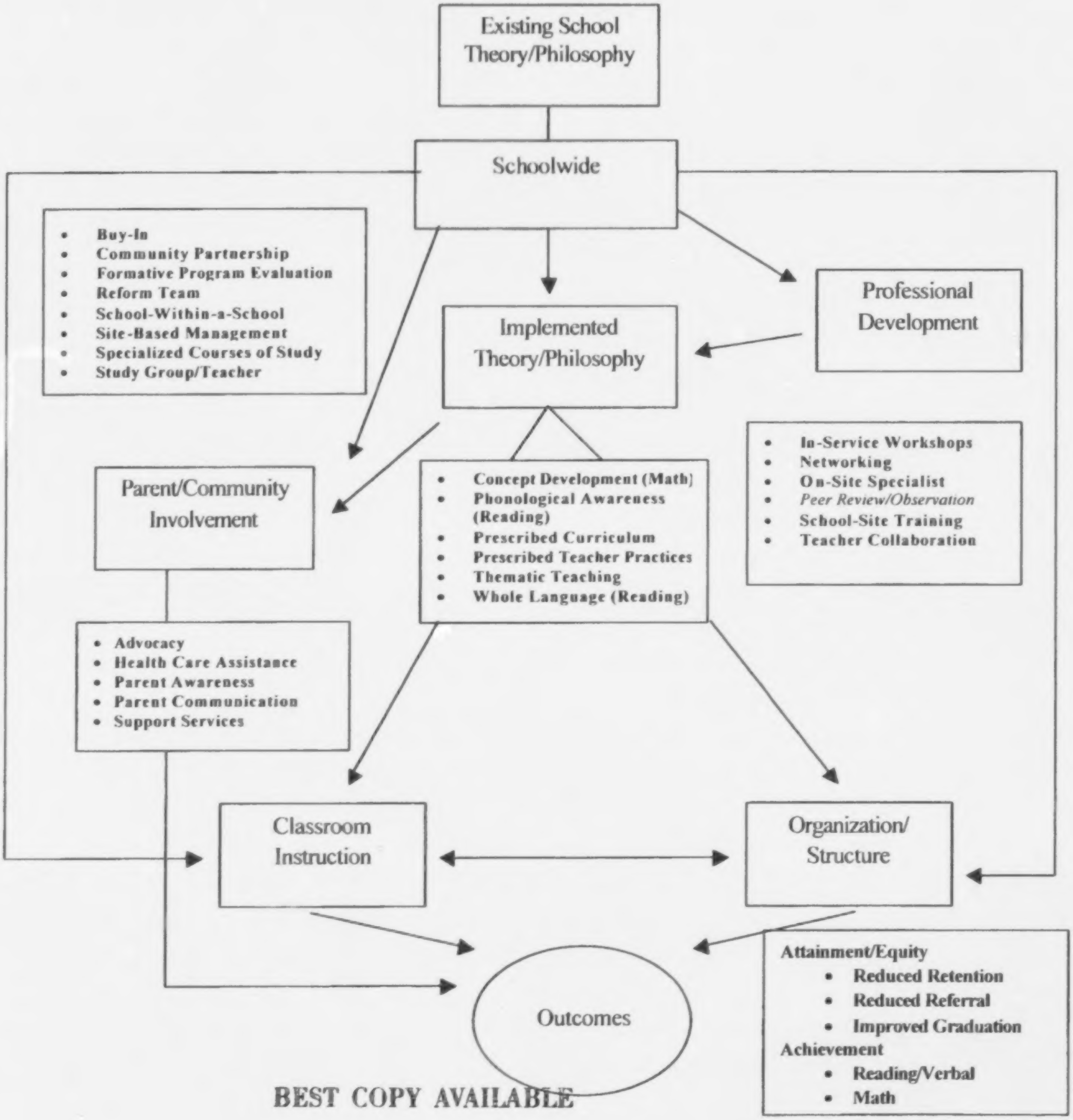
Existing School Theory/Philosophy
Schoolwide
• Buy-In
• Community Partnership
• Formative Program Evaluation
• Reform Team
• School-Within-a-School
• Site-Based Management
• Specialized Courses of Study
• Study Group/Teacher
Professional Development
Implemented Theory/Philosophy
• In-Service Workshops
• Networking
• On-Site Specialist
• Peer Review/Observation
• School-Site Training
• Teacher Collaboration
Parent/Community Involvement
• Concept Development (Math)
• Phonological Awareness (Reading)
• Prescribed Curriculum
• Prescribed Teacher Practices
• Thematic Teaching
• Whole Language (Reading)
• Advocacy
• Health Care Assistance
• Parent Awareness
• Parent Communication
• Support Services
Classroom Instruction
Organization/ Structure
Outcomes
Attainment/Equity
• Reduced Retention
• Reduced Referral
• Improved Graduation
Achievement
• Reading/Verbal
• Math

Figure J.2
Talent Development Career Academies: Reading/Language Arts Program Features

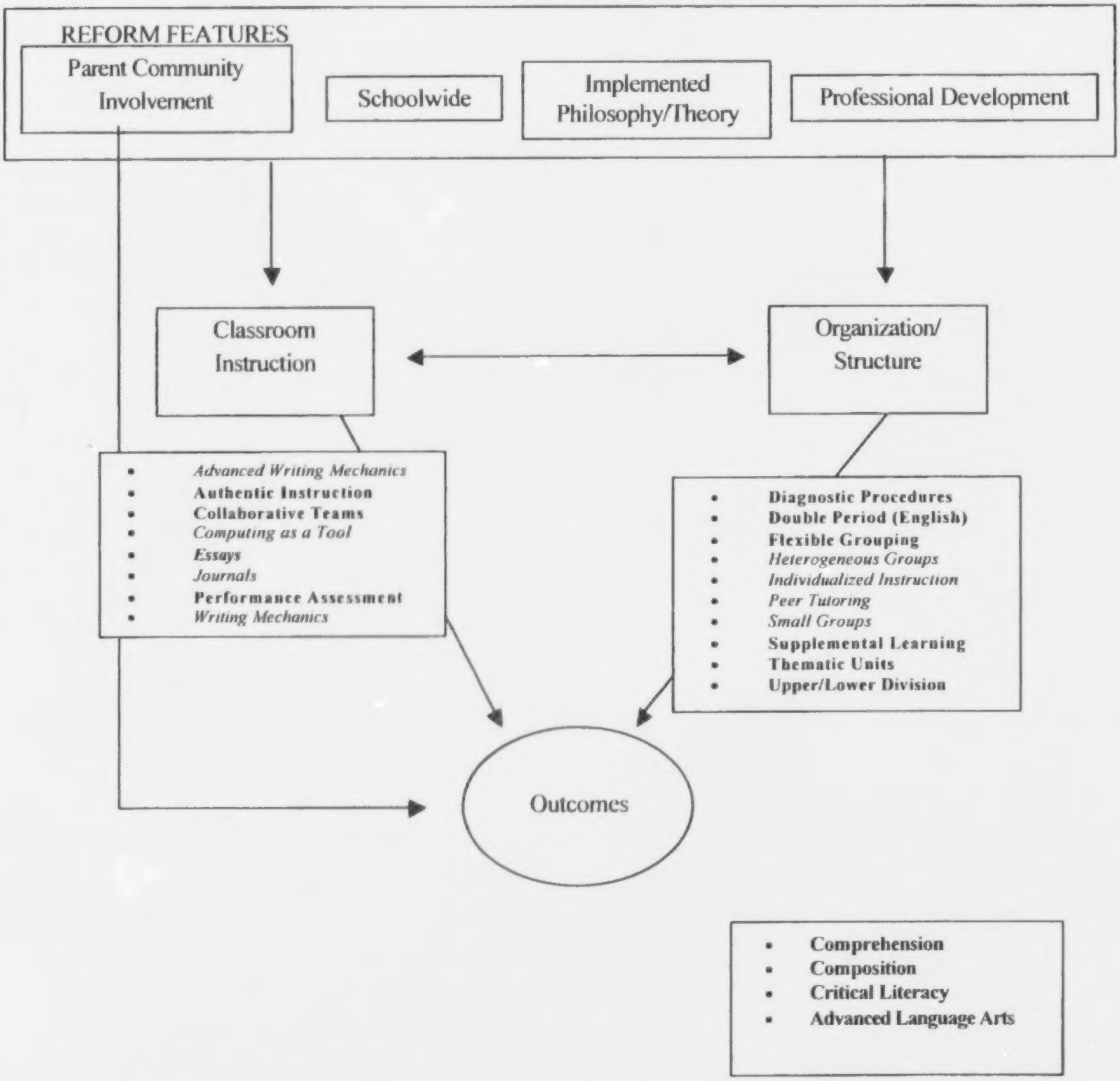
REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Advanced Writing Mechanics
Authentic Instruction
Collaborative Teams
Computing as a Tool
Essays
Journals
Performance Assessment
Writing Mechanics
Diagnostic Procedures
Double Period (English)
Flexible Grouping
Heterogeneous Groups
Individualized Instruction
Peer Tutoring
Small Groups
Supplemental Learning
Thematic Units
Upper/Lower Division
Outcomes
Comprehension
Composition
Critical Literacy
Advanced Language Arts

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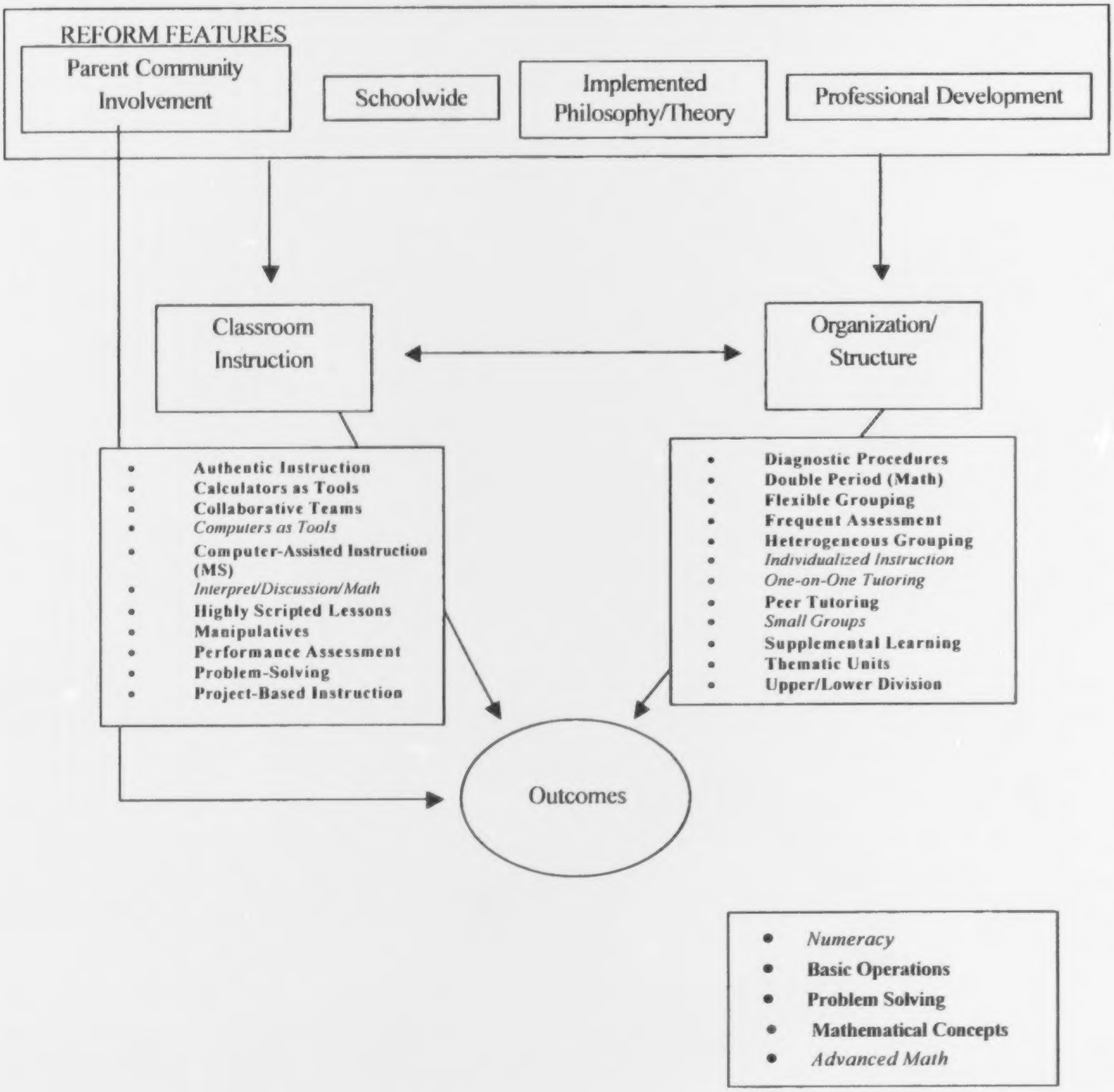
Figure J.3
Talent Development Career Academies: Math Program Features


REFORM FEATURES
Parent Community Involvement
Schoolwide
Implemented Philosophy/Theory
Professional Development
Classroom Instruction
Organization/ Structure
Authentic Instruction
Calculators as Tools
Collaborative Teams
Computers as Tools
Computer-Assisted Instruction (MS)
Interpret/Discussion/Math
Highly Scripted Lessons
Manipulatives
Performance Assessment
Problem-Solving
Project-Based Instruction
Diagnostic Procedures
Double Period (Math)
Flexible Grouping
Frequent Assessment
Heterogeneous Grouping
Individualized Instruction
One-on-One Tutoring
Peer Tutoring
Small Groups
Supplemental Learning
Thematic Units
Upper/Lower Division
Outcomes
Numeracy
Basic Operations
Problem Solving
Mathematical Concepts
Advanced Math

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Talent Development Career Academies
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Appendix A: Glossary

The glossary provides definitions and examples of each program feature mentioned in this report. The glossary has alphabetical listings in the following sections:

1. Schoolwide Program Features
2. Implemented Theoretical/Philosophical Program Features
3. Professional Development Program Features
4. Parent/Community Involvement Program Features
5. Organizational/Structural Features
6. Classroom Instruction Features

Each program feature listed in this glossary provides:

- *A definition* of the generic feature
- *A description* of how the process should work once implemented
- *Examples* of the reforms that include this feature

1. Schoolwide Program Features

Backmapping

Definition: *A curriculum development process that begins with a set of specific learning standards and works "backward" to determine what students need to know and be able to do to meet those standards, from which both curriculum and instruction, along with embedded assessments, are designed.*

Description: Implicit in this process, given the fact that the school site is presumed to have the responsibility to develop the curriculum, rather than an outside entity prescribing a curriculum, is that this process will involve, at the least, the teaching faculty of the school in a collaborative process to set the broad curriculum and possibly individual lessons. Some models may involve other school-site personnel and/or parents in the backmapping process. The process itself includes the analysis of specific learning standards in order to develop performance indicators for those standards; the determination of scope and sequence of instruction across a school year to meet the performance indicators; and the development of a specified number of instructional units related to the scope and sequence. Included with the instructional units would be recommended curricular resources, teaching strategies, and embedded assessments. This last step suggests that a school staff must have access (most likely through extensive professional development) to resources and/or the skills in teaching methods, resources, etc. Individual teachers may plan individual lessons or projects by beginning with a learning standard and designing a lesson to assist students in meeting that standard.

Example: Modern Red Schoolhouse

Buy-in

Definition: *A group decision that requires the majority of the personnel in the school to adopt the reform model in question.*

Description: This is a process for the school staff to decide which reform fits into their goals as a community. Often staff vote before design adoption. This process gives schools the opportunity to choose the design that best fits their needs, philosophies, and, in a larger sense, communities. This process builds staff unity and ensures that the teachers are willing to go with an intense process. In some cases, this extends to parents or the community.

Examples: Accelerated Schools, America's Choice, Modern Red Schoolhouse, Success for All, Talent Development Career Academies

Community Partnership

Definition: *The model builds a partnership with local organizations to help schools address students' needs. These features often work to link school achievement to the community.*

Description: Organizations might be consulted when the school is developing curricula, business might give hiring preferences to students graduating from a specific program at the school, or internships might be developed.

Examples: America's Choice (HS), Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Formative Program Evaluation:

Definition: *A periodic evaluation of both program implementation and the resulting student outcomes for the explicit purpose of furthering the development of the reform and the school.*
Description: Program evaluation can be continuous or at specific times (e.g., after one year of implementation). The evaluation can be internal or provided by an outside consultant. The distinguishing feature is that the assessment is not done for judgments of the students or employees, but instead to assist the formation of further reform efforts.
Examples: Accelerated Schools, America's Choice, ATLAS, Early Intervention in Reading, First Steps, Lightspan, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Inquiry

Definition: *This is a specific process used by groups within the school (i.e., teachers, administrators, possibly parents, and students) to conduct action research in the school and to make recommendations to the school for reform actions to be adopted and implemented. The inquiry groups act as a vehicle for directing the reform in the school.*
Description: The school community establishes the issues and research questions of the inquiry groups, and all members of the school participate in at least one of the inquiry groups. The process includes defining the issue/problem being studied, determining what data needs to be collected and analyzed to study the problem, including external research (e.g., educational research) and school-site data. The inquiry groups make recommendations or present action plans to the school based on the results of the inquiry. The reforms implemented by the school are tied to the action plans from the inquiry. To consider the degree to which reforms implemented by the school are tied to specific student outcomes, the focus of inquiry groups must be taken into account.
Example: Accelerated Schools

Instructional Guidance

***Definition**: This feature provides a common language and understanding among educators in the school about the school's instructional goals, methods, and practices, and is used by the reform model as part of the reform process at the school. The instructional guidance system serves as a directional compass to educators for making decisions about instruction both at the schoolwide level and at the classroom instruction level.*
Description: This feature may be a mission or vision statement developed by the school, and/or a local or state set of instructional standards that the school has adopted as their own. To be "active," this feature must be agreed upon by the internal school community and be used as part of the reform process, serving as a resource in making schoolwide decisions such as the selection of specific instructional materials or choice of professional development. The presence of an instructional guidance system does not necessarily imply it is an active feature. If the guidance system was not referred to in decision-making, it is inactive. A study of factors related to site-based managed schools' effectiveness in implementing curricular and instructional changes found that while low-innovator schools may have had such documents (mission or standards), they were often filed away or ignored, and there was little agreement or shared understanding about the instructional direction of the school (Robertson and Wohlstetter 1995).[5] Conversely,

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[5] Robertson, P. J., & Wohlstetter, P. (1995). Generating curriculum and instructional innovations through school-based management. *Educational Administration Quarterly, 31*(3), 375-405.

the study found that the presence of an active instructional guidance system was a contributing factor in high-innovator schools.
Examples: Accelerated Schools, America's Choice, ATLAS, First Steps, Modern Red Schoolhouse, School Development Program

Learning Contracts/School

Definition: *The school enters a "contract" with students and parents in which each party makes a commitment to take specific action related to that student's education. This is related to Learning Contracts/Parent and Learning Contract/Student and defines the school's responsibilities in the contract.*
Description: Generally the schools' commitment falls into the category of providing specific "opportunities to learn." If a student is expected to reach certain learning goals, the school commits to specific actions to help the student attain those goals. For example, in some Modern Red Schoolhouse schools, individual education compacts are written for each student, and those compacts serve as a learning contract/school.
Examples: Modern Red Schoolhouse

Looping

Definition: *Students stay with the same teacher and student peers for two or more years.*
Description: A feature used in elementary and middle schools. For students, looping provides closer social relationships with teachers and peers. Teachers more fully know students' strengths and weaknesses and are better able to meet individual student needs. Ongoing peer relationships increase students' comfort and knowledge of their new grade. Since students know most of their peers, they spend less time finding and developing new friendships.
Examples: America's Choice, Modern Red Schoolhouse

Parent/Community Group

Definition: *A formal group that focuses on parental and/or community involvement in the school; the group often includes school personnel, representative parents, and members of the community.*
Description: This group or committee deals with issues of concern to parents and to the greater community. This may include issues such as attendance of students, school-based interventions, parental and community involvement, achievement, volunteer activities, or problems such as discipline. This feature may increase the school-home connections. The groups' agendas are set according to the needs of the parents, students, and school.
Example(s): ATLAS, School Development Program, Success for All

Reform Team

Definition: *A formal group that provides leadership in the planning and implementation of the reform model. This group often consists of the principal, on-site facilitator, and representatives of teachers and parents.*
Description: The group meets frequently to plan the implementation of the reform, and continues to meet during the implementation process in order to set policies regarding how the program should be adapted to the needs of the school.
Examples: Accelerated Schools, America's Choice, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

School-Within-a-School

Definition: *A middle and high school feature geared toward breaking down the size and anonymity of the school. Students are divided into smaller groups, often called "families," "academies," or "houses," with typically 120—250 students. Students take core classes together and share the same teachers.*

Description: This feature intends to increase the connections between students and teachers, and among students. The feature often includes assigning an advisor to each group of students, who acts as an advocate and stays with the students throughout their time at the school. The groups sometimes have different academic foci or themes, such as dramatic arts, health sciences, or business and technology. In its extreme form, the houses are highly autonomous, use different physical spaces in the school, and have their own administrations.

Examples: America's Choice, Talent Development Career Academies

Site-Based Management (SBM)

Definition: *The reform model requires the implementation of site-based management, a decentralized decision-making structure with less hierarchical leadership.*

Description: Site-based management is a model of shared decision-making at the school in which representatives from various constituencies within the school, along with the school administration, make decisions in specified areas (e.g., budget allocation or professional development). SBM suggests a flatter school governance structure than the traditional hierarchical structure. Proponents of SBM suggest that when the school decisions are made by a broad constituency, there is more accountability and buy-in for those decisions.

Examples: Accelerated Schools, ATLAS, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Specialized Courses of Study

Definition: *Students choose a course of study based on interest or career aspirations.*

Description: Like career academies in a high school (Grades 10 to 12, or 11 to 12), the school offers several programs designed to increase course relevance for students and enhance student engagement. Students select a specialized course of study that can emphasize specific career strands, or a specialized college preparatory program, such as an International Baccalaureate program or intensive Advance Placement coursework. The feature is related to school-within-a-school in terms of the number of students and configuration with faculty/classes. Within the reform programs, this feature should not be confused with academic tracking into vocational and college preparatory tracks.

Examples: America's Choice, Talent Development Career Academies

Study Groups/School

Definition: *Similar to Study Groups/Teachers, but it includes members of the broader school community (such as parents, non-certified staff, and/or students) in the research about and action planning on reform issues.*

Description: This feature serves two important functions: broadening participation in and support for the reform activities, and providing alternative views and knowledge to the study groups.

Examples: Accelerated Schools, School Development Program

Study Groups/Teachers

Definition: *Groups or teams of teachers formed around specific issues to conduct research and take actions as specified by the reform model; these groups and their work are integral to the reform process.*
Description: Teachers collaborate to study different aspects within the school. They use the knowledge they gain through research and assessment to inform their future actions and then study those new actions. This feature is distinguished from Inquiry in its more limited use of systematic methodology or Inquiry philosophy.
Examples: ATLAS, America's Choice, Modern Red Schoolhouse, Talent Development Career Academies

Systematic Learning

Definition: *The program uses a comprehensive and coordinated structure or set of structures that may allow for some individual flexibility but which ultimately unify and organize the instruction.*
Description: Systematic learning tightens the link between features in the implemented theoretical/philosophical category and features in the organizational/structural category. This linkage organizes not just the classroom instruction features, but also the curriculum, outcome measures, and even professional development. This feature takes a comprehensive approach to a defined topical area. Because methods, materials, and outcomes are tightly linked, teachers have limited adaptability. This is not to say that it is inflexibly rigid, though this feature may be incompatible with certain empowerment approaches like learning community or student empowerment. The feature should affect greater consistency among classroom instruction, grade levels, and outcome measures. It is clearly visible in Success for All and, arguably, Reading Recovery. This feature is associated with prescribed curriculum or teaching practices.
Examples: America's Choice, Modern Red Schoolhouse, Success for All, Early Intervention Reading

Taking Stock

Definition: *Taking stock is a schoolwide collection and analysis of data about the school to assess the school's strengths and weaknesses. In essence, taking stock inventories the school to understand its current state.*
Description: Taking stock can involve both a critical analysis of student and teacher performance and a realistic inventory of existing school programs, resources, etc. This feature is usually present in process-oriented reform models and is usually conducted by a group within the school. Proponents of taking stock believe that it will cause the school to plan more strategically.
Example(s): Accelerated Schools, America's Choice, ATLAS, Modern Red Schoolhouse

Visioning

Definition: *A conscious effort by members of the school, and sometimes the larger community, to decide how they want the school, instruction, etc. to look.*
Description: Visioning involves a fairly lengthy process in which members of the community meet, discuss, and reach consensus on vital school decisions that effect how the school will be run, how a model will be implemented, etc. A product of visioning can be instructional guidance and may include specific classroom procedures depending on the shared vision that is created.
Examples: Accelerated School

2. Implemented Theoretical/Philosophical Program Features

Acceleration

Definition: *The model advocates believe that enriching techniques and activities are most effective to address basic and higher order skills.*

Description: Acceleration can also be seen as an alternative philosophy to remediation for those classrooms where some students are academically behind. Model providers that use acceleration as a guiding principle believe that remediation is not effective to enhance student learning and is merely a repeat of already failed methods. Acceleration, on the other hand, uses alternative approaches that teach basic skills in an enrichment context and generally do not remove the student from the regular program. For instance, acceleration uses a literature-rich context for teaching basic language skills. Acceleration philosophy identifies the cause of less student learning as the teaching practice rather than the student's ability. Schools normally also adhere to a concept development philosophy.

Examples: Accelerated Schools, America's Choice, Talent Development Career Academies

Caring Community

Definition: *This feature represents a belief that establishing a community of caring adults not only within the school but also outside the school, will benefit student learning.*

Description: Proponents maintain that students have greater academic success when part of a larger caring community, in which the adults of the community (parents, teachers, social service providers) work together to address the needs of the students. This community safety network can extend far beyond school learning issues and can include providing children with meals, clothing, and emotional support.

Examples: School Development Project, Talent Development Career Academies

Child-Centered/Developmental

Definition: *This theory approaches teaching learning through the child's previous understandings, and follows the child's natural interests.*

Description: This child-centered model is based initially on the work of Piaget, and more recently on the work of Russian psychologist Vygotsky. Rather than teaching literacy according to a "correct" or "transmission" model, it exercises and guides children's metacognitive strategies, helping children develop adult literacy on their own through guided experimentation and trial and error. Teachers try to keep students within what Vygotsky termed the "Zone of Proximal Development," a place where the students are in familiar enough territory to function, but where enough is unfamiliar that they are stimulated to grow. Note: This approach differs from a Student Empowerment approach in that it is still teacher-led. The hallmark of this approach is the interactivity between teachers and students as they negotiate the direction of learning. On the whole, this approach is compatible with most other approaches and, indeed, is a staple of the American education system.

Examples: ATLAS, First Steps, Modern Red Schoolhouse, School Development Program

Concept Development

Definition: *The emphasis in teaching is on conceptual understanding and on using higher-order thinking skills.*

Description: This theory suggests that skills are learned through the development of conceptual understanding. Knowledge acquired conceptually is thought to be more likely to be retained, retrieved, and applied in both related and unrelated contexts. The method of teaching begins in the earliest of grades, so that students have the requisite understanding upon which to build higher order thinking skills. An example of this philosophy of instruction/curriculum is suggested in the math standards of the National Council of the Teachers of Mathematics.

Examples: Accelerated Schools, America's Choice, ATLAS, Modern Red Schoolhouse, Success for All (math)

Constructivist Learning

Definition: *This theory is strongly rooted in cognitive psychology, especially in the premise that learning is constructed by the individual (student), based on prior knowledge, interactions with the new learning, and generating connections to other domains of knowledge.*

Description: Constructivist learning theory challenges the traditional transmission/reception model of learning. Constructivist learning theory places the learner as the central participant and the teacher as the facilitator in the process of learning. Learning is considered to be knowledge construction or generation. Constructivist instruction is often collaborative with students working together often in "active learning" or "problem-based" learning projects that provide opportunities to interact with the material, relating it to previous knowledge and building conceptual bridges to other areas of understanding. This type of teaching is often linked to Student Empowerment, in which students' interests help guide the instructional focus in the classroom.

Examples: Accelerated Schools, ATLAS

Phonological Awareness

Definition: *A systematic approach to teaching the relationships between oral and written language.*

Description: Phonics is the most famous component of this approach, and the two are often treated synonymously in popular parlance. But Phonological Awareness is a broader category than Phonics, which properly is the relationship between letters and sounds. Phonological Awareness encompasses all aspects of the relationships between sounds and written language. For example, the knowledge that "The cat is running" has four words (many young children will say there are two: "thecat" and "isrunning") is a kind of phonological awareness. More generally, children must be able to distinguish between sentences, words, syllables, and phonemes (individual sounds) before they can even use Phonics or, for that matter, decode. Because phonological rules are established—that is, some utterances are correct and others are not—and because phonology is so complex, advocates of this approach argue that phonology should be taught systematically and directly, rather than indirectly. Its rules should be taught, not discovered. As one of the two great contenders in the reading wars of the past several decades (Whole Language is the other), Phonological Awareness has gained momentum especially in the early stages of reading instruction. (See also Whole Language).

Examples: America's Choice, Early Intervention Reading, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All

Prescribed Curriculum

Definition: *A set curriculum is followed across all grade levels in specified subject areas, and teachers are expected to base all instruction on the curriculum.*
Description: A prescribed curriculum might include textbooks, supplemental reading materials, or specified projects to be used at predetermined points in the instruction. The instructional methods are not necessarily prescribed, but they may be implied based on the structure of the content and related assessments. The traditional textbook adoptions at a district level are a form of a prescribed curriculum based on the selection of specific texts. In the district example, teaching methods are left to the discretion of individual teachers.
Examples: America's Choice, Modern Red Schoolhouse, Success for All

Prescribed Teacher Practices

Definition: *Teacher practices are defined in detail (step-by-step) by the program or reform model.*
Description: Teacher methods are determined by the reform model and are usually related to a specific curriculum program. Generally this is part of complex instructional programs where specific instructional sequences with particular types of materials are used in combination to achieve student success. Some prescribed programs allow for variation when the adapted methods or materials fit within the intended sequence of instructional activities. Occasionally, teacher practice is prescribed, for instance, in models that advocate project-based learning or student collaboration but do not recommend a particular curriculum.
Examples: Early Intervention Reading, Success for All

Reflective Practice

Definition: *Professionals are encouraged to reflect on their daily practices to help them understand which practices are successful and which need improvement. This reflection can be done while in action or in a variety of other ways, such as journaling, analyzing conversations, etc.*
Description: Advocates maintain that teaching—and thus student outcomes—will improve when teachers study their own practices related to student performance, and one another's practice, and use student work to reflect on changes in their own teaching practice.
Examples: Accelerated Schools, America's Choice, ATLAS, First Steps, Talent Development Career Academies

Self-Extending System

Definition: *The program attempts to instill in children the rudiments of a system of learning that each student will adopt and use.*
Description: The ultimate goal of M. M. Clay's method and one of the key theories driving Reading Recovery, this system will empower the student to continue expanding metacognitive strategies and horizons, enabling Vygotskian development to take place guided increasingly by the student's desire and ability, rather than by instructor direction. The approach is consonant with both Whole Language and Developmental philosophies, but it more directly addresses the need for a bridge between Decoding A and Critical Literacy. That bridge is Decoding B, specifically designed for this purpose: to build a network of strategies of increasing sophistication aimed at meaning getting. It combines the instructional paradigm of word attack with the meaning orientation of Whole Language, resulting in what might be called "meaning

attack." With this in place proponents maintain, the implementation of a student empowerment approach should become less risky.
Examples: Early Intervention Reading, Modern Red Schoolhouse, School Development Program

Standards-Based Instruction

Definition: *Instruction should be designed from learning standards, student work should be assessed against standards, and instruction should be revised based on the student work to ensure that students meet standards.*
Description: Advocates believe that all instructional endeavors of the school should be directed by, and articulated with, clearly defined content and/or performance learning standards. The standards provide instructional guidance and coordinate the primary activities of the school. Standards-Based Instruction is usually associated with a prescribed curriculum that is related to the standards, but depending on the model, this curriculum may be prescribed by the reform model, or designed by the local school. In some circumstances, national associations or states have developed standards that the national or state assessments are or will be designed to measure.
Examples: America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse

Student Empowerment

Definition: *Students are encouraged to take charge of their own education in order to foster an enjoyment of learning.*
Description: Students can take charge of their education through features/activities such as selecting their own reading materials, devising their own written assignments, creating their own interpretations, etc. Advocates believe the benefits of this feature are as follows: (a) students begin to love learning, because it is important to them; and (b) students learn how to learn, because they are given opportunities to do so and because they have the motivation to do so. In short, proponents maintain education becomes much more meaningful, and students push themselves to levels of achievement not likely in a less student-centered approach. By fostering responsibility early on, students are also prepared for life, where they will be responsible for their conduct and performance in jobs, relationships, etc. The possible downside of this approach is the chance that students will pursue only topics of immediate interest at the expense of less interesting but equally important topics; that they will choose activities that are below or above their skill level; that they will not teach themselves how to learn well; and/or that the benefits of this method are hard to measure, since students in part develop their own curriculum. Note that this approach is highly dependent on the degree of implementation, which requires significant teacher training, planning, record keeping, etc.
Examples: Accelerated Schools, First Steps, Modern Red Schoolhouse, School Development Program

Teacher Professionalism

Definition: *The belief that instructional and reform decisions are best made at the school level by the educators who have the most knowledge about the unique needs of the students at the school when given the appropriate support/structure/training (related to the specific reform model).*

Description: Reform models based on teacher professionalism tend to be more process than content-driven, and rely on intensive training of teachers at the school site in the processes of the reform. There is often a balance between what type of change is determined by the reform model and what types of decisions will be made by the teachers. The philosophical continuum opposite of Teacher Professionalism would be an externally "Prescribed Curriculum/Instruction," which is given as a package to the teachers. This is related to but distinctly different from the feature "Prescribed Systematic," which refers to the nature of the instruction as it relates to the student rather than the nature of the reform as it relates to the teachers' role.

Examples: Accelerated Schools, ATLAS, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Thematic Teaching

Definition: *The belief that the curriculum should be organized in a way that allows for integrating lessons and themes across subject areas, to increase the relevance of the instruction for the students and to deepen their understanding of concepts that are related to multiple domains of learning.*

Description: This feature illustrates that some theoretical/philosophical approaches are less fundamental and more instruction-oriented than others. Where a Developmental approach touches on nearly everything in a student's early career, Thematic Teaching is concentrated on instruction. Nevertheless, it is a theory because it generates features in several other categories. It usually leads to a multidisciplinary, multimedia, content-driven curriculum. It is commonly associated with Whole Language, though it could work well with several other approaches.

Examples: Accelerated Schools, America's Choice, Success for All, Talent Development Career Academies,

Whole Language

Definition: *Whole Language emphasizes that all learning of communication, including written, must be meaningful, and any approach to teaching literacy must be meaning-oriented.*

Description: Whole Language is one of the two great contenders (the other is Phonics, or Phonological Awareness) in the decades-old reading wars. As a philosophy, it rejects as "unnatural" and "boring" approaches to teaching reading, such as Phonics and basal readers, which focus on building discrete skills. It favors holistic approaches. Whole Language approaches usually include Phonics, but it is usually taught in a more meaning-oriented and less systematic context. At the same time, it emphasizes that literacy is acquired through a complex psycholinguistic process, which is often best helped along through indirect and environmental means rather than through more direct methods of instruction. (See also Phonological Awareness.)

Examples: Accelerated Schools, America's Choice, First Steps, Modern Red Schoolhouse, School Development Program, Success for All

3. Professional Development Features

Certified Specialist

Definition: *As part of the intervention, a certified specialist comes to the school to provide support to the school during implementation that may include the training of teachers and other participants.*

Description: The certified specialist's work may include providing the school-site training in the reform model. Additionally, the certified specialist often consults with staff, ensuring that program implementation is in accordance with the official program design.

Examples: Accelerated Schools, America's Choice, Success for All, Modern Red Schoolhouse

In-Service Workshop

Definition: *Teacher-attended workshops provided by a topical expert.*

Description: The in-service workshop feature includes both workshops directly related to the reform model (see certified specialist), and workshops focusing on topics such as teaching methods, or assessment methods, which are associated with a reform model or identified as a need as part of the reform. The in-service workshop is a long-time staple of professional development in schools. This feature has come under fire for not including follow-up and thus not having any sustained or meaningful impact. Placed in a more comprehensive program of professional development, however, such workshops could be of benefit.

Examples: Accelerated Schools, America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Networking

Definition: *Teachers meet with teachers from other schools participating in the same intervention/reform.*

Description: Networking enables educators to maintain a dialogue with one another about the intervention—its effects, problems, etc. This feature provides greater consistency of implementation across a region and increases the net of support available to teachers. Most commonly, networking is face-to-face, but more recently can be via electronic medium.

Example(s): Accelerated Schools, America's Choice, Early Intervention Reading, First Steps, School Development Program, Success for All, Talent Development Career Academies

On-Site Facilitator

***Definition:** The intervention requires a facilitator from the school to attend an extensive training by the reform model, and to work full- or part-time as a school-site facilitator in the reform process. A person from the school or district is trained in the model.*

Description: This feature is similar to an on-site expert, except this person is employed by the school or the school district (and is thereby primarily affiliated with the district) not the model provider, and this person receives specialized training in the process of the reform (by the reform or an organization affiliated with the reform). The facilitator is freed from other job responsibilities in order to fulfill the role of facilitator.

Examples: Accelerate Schools, America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse, Early Intervention Reading, First Steps, School Development Program

On-Site Specialist
Definition: *The intervention locates a full- or part-time specialist from the model at the school site to assist the school with the implementation of the reform.*
Description: This specialist is affiliated with the reform model, and is employed by the reform model, or contracted by the school or district. An on-site specialist helps with the school's implementation of the reform model, providing or arranging specific trainings required by the model and day-to-day support to the school. The specialist may also serve as an evaluator, assessing the school's implementation of the reform. The specialist often individually consults with teachers, models classroom technique, and conducts observations. The model specialist spends at least one day per month on-site.
Examples: Modern Red Schoolhouse, Success for All, Talent Development Career Academies

Peer Review/Observation
Definition: *Teachers have opportunities to observe peers and be observed by colleagues.*
Description: Teachers observe one another's classroom instruction to overview their own teaching methodologies. It may also help them see how other teachers implement the reform features in the classroom. Sometimes an on-site facilitator may serve as the reviewer or model.
Examples: ATLAS, School Development Program, Success for All, Talent Development Career Academy

School-Site Training
Definition: *A design for training the school in the intervention that involves a certified specialist coming to the school to train the entire school staff in implementing the reform.*
Description: This feature ensures that all individuals at the school-site receive the same training in the reform at the same time. Because the specialist is affiliated with the reform model, there is a high degree of fidelity in the implementation of the training. Advocates believe broad staff training is necessary to build staff buy-in.
Examples: First Steps, Lightspan, Modern Red Schoolhouse, Success for All, Talent Development Career Academies

Teacher Collaboration
Definition: *Teachers can plan, organize, or teach together in a concentrated effort to improve one another's practice.*
Description: Teachers work together and consult with one another about curriculum and pedagogy within subjects, make connections between subjects, and assess the effectiveness of specific instructional practices. Teacher collaboration is highly related to reflective practice. As a form of within-school networking, teacher collaboration recognizes teacher expertise and considers cooperative work a method for enhancing teacher skills.
Examples: Accelerated Schools, America's Choice, ATLAS, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Teacher Inquiry/Portfolios
Definition: *Teachers collect samples of their and student's work, to be shared, discussed, and analyzed by colleagues; the body of work samples that are collected become a resource to the whole faculty.*

Description: Teachers build a repertoire of strategies to address student learning and outcomes. By sharing, discussing, and compiling them, the school will become increasingly successful in helping students meet learning outcomes that were as a whole (meaning a weakness not of one student but of a substantial number of students) not previously being met at the school.
Examples: America's Choice, ATLAS, Early Intervention Reading

Training of Trainers
Definition: *A design for training the school in the intervention that involves sending to be trained by the model in the reform process one or more people from the school, who then provide training to the whole school. The training provided by the reform model acts as a sort of certification process for the trainers who return to the school.*
Description: This feature is usually linked to a designated on-site facilitator who is the person primarily responsible for conducting the school-site trainings and providing ongoing support to the school during implementation of the reform model. Creating this threshold to entry has the dual effect of allowing only committed school systems to participate and ensuring a certain degree of consistent background among implementing schools—namely, the certification process. Both of these effects are designed to make the implementation across schools more consistent and improve the long-term solvency of the program.
Examples: Accelerated Schools, America's Choice, First Steps, School Development Program

4. Parent/Community Involvement Program Features

Advocacy

Definition: *Program assists parents in advocating for their children with teachers or governmental agencies.*
Description: The program may intervene on behalf of children or schools regarding such issues as placement decisions, teacher perceptions of individuals, etc. This feature is often used to assist parents who do not understand how to work within the school system.
Examples: School Development Program, Talent Development Career Academies

Book Distribution

Definition: *The program distributes books to households that may have few.*
Description: Book distribution can occur in a number of ways. Lending library books or giving books to families are two ways. A third route is to send home "book sacks," which contain a book and optional ideas for parents on how to share the book with the child.
Example: Early Intervention Reading

Health Care Assistance

Definition: *Assisting parents in providing children with health care.*
Description: This assistance may include fortified formula, diapers, medical care, meals, nutrition assistance, mental health referrals, chemical dependence referrals, dental care, etc.
Examples: School Development Program, Talent Development Career Academies

Learning Contracts/Parent

Definition: *Each parent is required to enter into some type of verbal or written commitment for the child's education.*
Description: This commitment can be a promise to read to their child each day, develop a learning contract, check homework, or serve on a school committee.
Examples: America's Choice, Early Intervention Reading, Lightspan, Modern Red Schoolhouse

Paired Reading (see Paired Reading in the Classroom Instruction category)

Definition: *The program puts two people together (usually of different abilities) to read. The stronger partner (here, the parent) helps the weaker read.*
Description: This feature is no different here than it is in the Classroom Instruction category. It is a very common parent feature, and many interventions require the parents to sign a contract promising to spend a specified amount of time reading with their child every night. In addition to affecting reading outcomes directly, this feature will also affect them indirectly by reinforcing classroom instruction features.
Example(s): America's Choice, Early Intervention Reading, First Steps, Success for All

Parent Awareness

Definition: *The program keeps the parents informed of program features, reform efforts, and events through outreach efforts from the school.*
Description: Examples might include informational nights, newsletters, etc. Parent awareness is designed to increase parent knowledge of and involvement in the reform effort.

Examples: Accelerated Schools, America's Choice, ATLAS, Early Intervention Reading, First Steps, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Parent Communication
Definition: *Parent newsletter and information about the school events and student homework are conveyed to parents.*
Description: As with parent conferences, this feature's relationship to outcomes may be indirect: increased awareness may help the parents reinforce classroom instruction. Where parent awareness is concerned with the reform model, parent communication is concerned with events and happenings both at the school and in the classroom.
Example(s): America's Choice, Early Intervention Reading, First Steps, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Parent Instructional Training
Definition: *The program trains parents on how to help their children learn.*
Description: Parents often want advice or guidance in specific ways of teaching their children. This feature provides that advice. This can be done in any number of ways: ongoing parent training workshops, newsletters, conferences, book sacks, etc.
Example(s): First Steps, Lightspan, Success for All

Parent Participation in Planning Curriculum
Definition: *Parents participate in the construction of the curriculum through committee membership.*
Description: This feature is compatible with the learning community feature described in the Theoretical/Philosophical category above. By participating, parents involve themselves more in the school community, reinforcing the school at home and the home at school. This is based on a belief in local control.
Example: Accelerated School

Parent Participation in Reform Team
Definition: *Parent representatives serve on the Reform Team (see under Schoolwide features).*
Description: This feature seeks both to increase parent involvement in reform activities and to ensure that parent perspectives are considered when developing reform implementation plans. It is based on beliefs in local control and respect for parents' opinions about their children's education.
Examples: Accelerated Schools, Success for All, School Development Program

Parent Participation in Site-Based Management
Definition: *Parents are involved in site-based management (see Site-Based Management in Schoolwide features). In participatory site-based management (i.e., everyone participates), parents are invited to play an active role; in representative site-based management, parents select representatives.*

Description: This feature seeks both to increase parent involvement and to ensure that parent perspectives are considered in the school's SBM activities. This feature increases parent support for the school's reform efforts.
Examples: Accelerated Schools, America's Choice, Modern Red Schoolhouse, School Development Program

Parent Volunteers
Definition: *Parents volunteer time to participate in programs.*
Description: The tremendous variety of ways parents can participate in schools makes assigning outcomes difficult. Parent can act as paraprofessionals and participate in a paired reading feature, which may affect Comprehension, or they may act as chaperones on a field trip. Volunteering is designed to increase parent engagement and increase the level of understanding and knowledge between parents and teachers. Parent involvement in the school gives students the message that parents value education.
Examples: Accelerated Schools, Early Intervention Reading, School Development Program, Success for All

Support Services
***Definition:** Providing support services to parents.*
Description: This assistance may include transportation, custodial childcare, translators, home visits, and referrals (e.g., services for battered women) and is based on a belief that students live in family systems that may need support, which will indirectly enhance the students' education.
Examples: ATLAS, School Development Program, Talent Development Career Academies

5. Organizational/Structural Features

Ability Grouping

Definition: *Students are clustered on the basis of shared ability, rather than age, grade level, or other factors.*
Description: Ranges from a far-reaching radical restructuring of a school, as in Success for All, where students switch between traditional age classes and ability-based classes, to simply identifying a problem that a number of students have and temporarily pulling them together to address the problem. It can be used for specific tasks, as a primary mode of instruction, or as a strategy within a classroom blended with other methods (e.g., heterogeneous grouping)
Examples: Success for All (Reading)

Basal Readers

Definition: *Program uses a series of graded readers or textbooks, usually constructed with controlled vocabulary and syntax.*
Description: Basal readers have a key advantage and a key disadvantage. The advantage to basal readers is that they help control instruction by making it more consistent, predictable, and comprehensive (e.g., they ensure children read from all genres and read from books of increasing difficulty). Basal readers have also been bitterly criticized by advocates of the Whole Language movement because they take choice away from children and allegedly reduce the pleasure of reading. The risk of going to a more choice-oriented reading program is that children will read only from one genre (e.g., short fiction) or will read only easy books. Cunningham (1991), the originator of the Four-Block Method, advocates mixing the two approaches, fostering a love of reading with comprehensiveness of reading instruction. Basal book publishers have also recently striven to make stories more natural and interesting to students, in spite of the controlled vocabulary.
Examples: Early Intervention Reading, School Development Program, Success for All

Cross-Year Portfolios

Definition: *Students keep their best work, some selected by teachers and some by students, in an electronic or physical file. Unlike grades, portfolios are student-centered tools.*
Description: Portfolios include exercises, projects, sample writings, drawings, etc. from different courses (cross-curricular) or students are encouraged to keep their works that they have done for a specific course. Portfolios help students to build self-esteem by documenting progress. The portfolios may be passed from grade to grade as students progress, and they provide evidence of individual development. They can also serve as formative or summative assessment tools for the school.
Examples: America's Choice, ATLAS

Diagnostic Procedures

Definition: *Program uses at least a partially explicit set of criteria and/or methods to evaluate individual children's prior performance and needs prior to participation in the program; this information is used primarily for placement.*
Description: Diagnostic procedures are used to determine eligibility for placement or the need for supplemental instruction or support. They also provide a relatively objective means of selection.

Example(s): America's Choice, Early, Intervention Reading, First Steps, School Development Program, Success for All, Talent Development Career Academies

Double Periods

Definition: *This high school feature is most often offered in ninth grade to students who are below grade level in reading or math, and uses enrichment rather than remedial methodologies. Students take two periods of reading and/or math.*

Description: Typically, double periods include two different class activities: core course requirements (i.e., ninth-grade English or algebra) and enrichment activities. Normally, these courses are strongly related to the implemented theory of acceleration rather than remediation. The additional course replaces a free period or elective and is supplemental rather than replacing the regular course. Therefore, the student does not fall behind in progress toward graduation.

Examples: America's Choice, ATLAS, Talent Development Career Academies

Flexible Grouping

Definition: *Teachers use various groupings of students depending on specific activities planned. Teachers are encouraged to use a range of grouping and instructional strategies, and to select those strategies that are most likely to be successful with specific students given a particular lesson.*

Description: Teachers may use ability grouping, heterogeneous grouping, or individualized instruction. The groupings are just for the duration of the activity. Flexible grouping gives teachers the opportunity to choose which strategies may be most beneficial for specific activities or students.

Examples: ATLAS, Lightspan, Modern Red Schoolhouse, Talent Development Career Academies

Frequent Assessment

Definition: *Students are tested or assessed frequently to monitor academic gains.*

Description: The key element of this feature is the frequency of efforts to measure performance. This may be used to group and regroup students as they meet specific instructional goals, or as a means to make sure that individual students and/or whole classes are academically progressing at an appropriate rate. The assessments may involve traditional standardized tests or performance-based assessments.

Examples: America's Choice, Early Intervention Reading, First Steps, Lightspan, Modern Red Schoolhouse, Success for All, Talent Development Career Academies

Heterogeneous Groups

Definition: *Students work in mixed ability groups.*

Description: This feature is frequently associated with efforts to "de-track" school programs and, as such, can have somewhat political connotations. The method of grouping is often used for collaborative group work to encourage students to work together toward a goal and to learn from one another. Some advocates of this method see it as the opposite of ability grouping, which is considered (by these advocates) as beneficial only to those students in the highest ability and as having negative effects on middle and lower groups by limiting educational expectations and opportunities to these groups. Others advocate the use of heterogeneous groups as part of a flexible grouping strategy in which various grouping strategies (i.e., individualized

instruction and ability or performance grouping) are incorporated depending upon the instructional task.
Examples: Accelerated Schools, ATLAS, Success for All (math), Talent Development Career Academies

Individualized Instruction
Definition: *Instruction and materials differ depending on individual student's ability and development.*
Description: This feature considers the variable needs and abilities of students. Teachers may either use various material and instruction methodologies depending on a group or individual students' needs. While some reforms use this method throughout the instruction process, some may apply this feature during remedial instruction.
Examples: ATLAS, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All (math), Talent Development Career Academies

Interactive Learning
Definition: *During the instruction, students communicate between themselves and with teachers.*
Description: This feature allows students, during instruction, to learn from each other, as well as from the teacher, through the exchange of ideas. Usually this feature involves structured or unstructured discussion between students and may involve students comparing ideas in order to come to a consensus. This is done by either using group work between students, or interacting with the teacher as a group or individually.
Examples: Accelerated Schools, ATLAS, Early Intervention Reading, Lightspan, Modern Red Schoolhouse, Success for All.

Literacy Rich Environment
Definition: *Program promotes literacy acquisition by promoting an environment that encourages literate activity.*
Description: Examples include a well-stocked library; wall decorations, such as signs, recipes, pictures with captions, etc.; and any environmental feature that reinforces print concepts and encourages reading.
Examples: America's Choice, First Steps, Success for All

One-on-One Tutoring
Definition: *Tutoring between a teacher or a paraprofessional and one student.*
Description: One-on-One Tutoring enables classroom instructional features, such as paired reading, ongoing written observations, and Vygotskian developmental approaches. It has been proven as a highly effective method of reaching a struggling individual, but its great expense confines it to a limited role, making classroomwide improvements unlikely.
Examples: America's Choice, ATLAS, Early Intervention Reading, Lightspan, Success for All, Talent Development Career Academies

Ongoing Written Observations

Definition: *Teachers keep records of and track progress on students' activities, books read, etc., on an individual basis.*

Description: The records describe what goes on in tutorials and often include information about how students are progressing, as determined by simple tests (e.g., how many familiar words can the student read from a list in a minute). The focus is on keeping nearly daily records of student progress, rather than scores on standardized tests or quizzes. Specific examples include proficiency checklists, teacher-kept journals, and "running records."

Examples: America's Choice, Success for All

Peer Tutoring

Definition: *Students instruct their peers.*

Description: Students function as partners in paired reading or other one-on-one classroom activities. Proponents advocate this technique as strengthening the impact of instruction on several levels. Students may be able to explain concepts in alternate ways that are more meaningful to peers. Second, it deepens the learning of both student and student tutor. Peer tutoring also lowers the costs associated with One-on-One Tutoring; however, it may not be as effective, given the reliance on the level of understanding and the ability to communicate clearly of the student tutor.

Examples: Accelerated Schools, ATLAS, America's Choice, Talent Development Career Academies

Pullout Program

Definition: *The program identifies a subset of children from the whole class, and that subset alone participates in the program. Student(s) are removed from the regular class activity (even if they stay in the classroom) and given alternate instruction.*

Description: Participation may come either during normal class hours or in some kind of extended program, such as full-day kindergarten or summer school. As with other features in the same class—grade limit, basic reading ability assumed—this feature limits and defines the methods, population, and outcomes targeted by the program.

Examples: Early Intervention Reading, Lightspan, School Development Program

Reading Canon

Definition: *This is a complete list of books accepted by the program, a list often graduated for difficulty, but not necessarily a basal series. Books not on the list are excluded from the program.*

Description: A reading canon is an interesting alternative to a basal series, and it is the approach taken in Reading Recovery. The books are themselves trade books, and thus fit into a literature-based curriculum. At the same time, they are controlled for content and difficulty, enabling a certain measure of consistency and comprehensiveness across sites.

Examples: Early Intervention Reading, School Development Program

Remedial Methodologies

Definition: *Instruction is primarily designed to help students who have fallen behind.*

Description: During a class period, repetition and practice of skills that the student has received instruction in previously. Teachers can use packaged units to address students' particular needs.

While some students are practicing current skills, students needing remediation are instructed in groups or individually, according to their needs.
Example: Success for All

Small Groups

Definition: *Children work together in small groups led by a teacher, by a paraprofessional, or by the students themselves.*
Description: The Small Groups feature can be flexibly employed for a variety of reasons. As an option for increasing individual attention, it is a less-expensive and less-effective alternative to one-on-one tutoring (Juel, 1996). If the groups are student-led, this feature can be used in a program emphasizing student empowerment. Small groups can be associated with ability grouping, either a long-run grouping or even ad hoc groups that teachers put together to address a common problem shared by several students.
Examples: Accelerated Schools, America's Choice, ATLAS, Early Intervention Reading, First Steps, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Student-Initiated Learning Centers

Definition: *Curricular/topical materials are kept in a central area, allowing students to choose the materials that interest them most.*
Description: This is one of several features that relate to the dilemma between more choice, which enhances student empowerment and motivation, and more structure, which effects greater consistency and comprehensiveness of learning. Programs that try to balance these two might include basal readers or worksheets to address the dilemma. A more traditional Whole Language program might couple this feature with similar content-oriented, student-centered features, such as silent individual reading, essays, theme-based learning, interpreting/discussion, etc.
Examples: Accelerated Schools

Supplemental Learning

Definition: *Students spend extra time engaged in learning, focusing on essentially the same things they are doing in regular classes but with additional time.*
Description: Often an after-school, summer, or extended program at the school, students are given more time-on-task or alternative instruction. All children need certain print experiences, linguistic abilities, and/or other environmental factors before they can really benefit from literacy instruction typically found in the first grade. For students who have less of this type of experience, Supplementary Teaching is designed to address that need. Extended-day kindergarten and summer schools are environments well-suited for this.
Examples: America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Thematic Units

Definition: *A deeply meaning-oriented approach, that teaches multiple subject areas within the context of a theme, e.g., oceans, thunderstorms, a piece of literature.*
Description: Related to the theoretical/philosophical approach of Thematic Teaching. Instruction is organized across various disciplines related to a central theme. The method increases relevancy of instruction by building conceptual bridges across different learning

domains for the student. Often the method leads to a multidisciplinary, multimedia, content-driven curriculum. At the middle- and high-school levels, thematic units require teacher collaboration both in planning and teaching.
Examples: Accelerated Schools, America's Choice, ATLAS, Lightspsan, Modern Red Schoolhouse, Success for All (math), Talent Development Career Academies

Trade Books

Definition: ***Students read literature-based books, as opposed to books such as basal readers, which are constructed using controlled vocabulary and syntax.***
Description: Favorites of whole language approaches, trade books are the opposite extreme of basal readers. They offer children "authentic" and "natural" language, and are purported to be more interesting. For more on the advantages and disadvantages of trade books, see the entries on basal books and reading canons.
Examples: Accelerated Schools, America's Choice, Early Intervention Reading, First Steps, School Development Program, Success for All

Upper/Lower Division

Definition: *This high school feature divides the high school into two separate divisions, lower grades and higher grades, which differ from one another in instructional focus or activities.*
Description: The division is often between tenth and eleventh grades, but differs by model. For example, the Talent Development Career Academy division is between ninth grade (a transitional program) and tenth to twelfth grades (career academies). America's Choice doesn't base the division on grade level, but instead focuses on successful completion of the tenth-grade standards, to allow students to progress at their own pace.
Examples: America's Choice, Talent Development Career Academies

6. Classroom Instruction Features

Advanced Writing Mechanics

Definition: *This feature comprises activities that not only call attention to the rules and mechanics of writing, but also use these skills within the context of planning, drafting, and revising created writing.*
Description: Similar to writing mechanics, these skills are associated with improving critical comprehension skills by focusing on more advanced writing. Proponents suggest transfer between writing and reading in skills such as understanding sequence and logical reasoning.
Examples: America's Choice, Success for All, Talent Development Career Academies.

Authentic Instruction

Definition: *Project-based instruction that is related to real issues and situations, and that allows students to contextualize what they are learning to their own world, giving the instruction relevancy. The tasks often arise out of student interest or specific class discussions, providing a "teachable moment" around which the teacher designs the task.*
Description: Authentic Instruction often involves project-based learning, where the topics are related to either "real-world" tasks or involve an academic topic applied to the student's world. At the high school level, authentic instruction can also be built around a community or business need, enhancing the "real-world" quality of the project.
Examples: Accelerated Schools, America's Choice, ATLAS, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies

Big Books

Definition: *An oversize book that the students read together as a class in a participatory way.*
Description: Participation may include student actors, readers, drawings (which may be pasted into the book), etc. While many Big Books are commercially available, a Big Book does not necessarily have to be.
Example(s): Success for All, Early Intervention Reading, First Steps

Calculator as a Tool

Definition: *A calculator is integrated into instruction and used to enhance the learning.*
Description: Students use the calculator as an aid to solving mathematical problems in and outside the classroom. The calculator is used for the exploration and development of mathematical concepts. This may help students focus on the process and mathematical concepts instead of focusing on the calculation itself.
Examples: Success for All, Talent Development Career Academies

Collaborative Teams

Definition: *Students work in groups toward common and individual goals without much direct guidance from the teacher.*
Description: This instructional method groups students of mixed ability to collaborate on a project, assignment, or task. Consonant with features like paired reading and small groups, collaborative teams are a means of improving problem-solving skills, empowering students, and fostering cooperation and collaborative skills. Teams can be as small as two, or they can be much larger.

Examples: Accelerated Schools, America's Choice, ATLAS, Early Intervention Reading, First Steps, Lightspan, Modern Red School House, School Development Program, Success for All, Talent Development Career Academies

Computer as a Tool
Definition: *The computer is used as a tool to help students accomplish a learning task.*
Description: Students use the computer in the classroom to aid them in a variety of ways. The computer can be used to help students learn reading, writing, math concepts, or research techniques. For instance, computers can be used as research instruments to collect and analyze data.
Examples: Accelerated Schools, America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse, Talent Development Career Academies

Computer Assisted Instruction
Definition: *Computer software is used for instructional delivery.*
Description: Learning software can both reinforce and teach students concepts that are being addressed in the classroom. The computer is often used to individualize instruction.
Examples: Lightspan, Talent Development Career Academy

Cooperative Learning
Definition: *In cooperative learning, heterogeneously grouped students work together on interdependent tasks in which all students must participate and contribute in order to succeed.*
Description: This interdependent work is thought to increase interactive learning; students learn from one another rather than from a teacher. Typically students' grades reflect both the group's work and the individual's work. This feature is sometimes designed to foster social interaction as well as learning goals. For instance, assigning specific roles to students within the groups to alter the group dynamics.
Example(s): Success for All

Creative Writing
Definition: *Students write stories or other imaginative material on their own, sometimes with guidance.*
Description: Creative writing is a more advanced form of writing than journals. It requires the combined use of the imagination and structure. While it may not require the same level of ability in manipulating information as essays, creative writing assumes an ability to use (not just be aware of) story structures, e.g., that stories have a beginning, middle, and end, that they usually involve conflict and resolution, etc. (See journals and essays.)
Examples: Accelerated Schools, Early Intervention Reading, First Steps, Lightspan, School Development Program, Success for All

Cultural Literacy
Definition: *Instruction is based on generally accepted "cultural" standards and a defined body of knowledge that every child should know.*
Description: This feature takes into account multiculturalism and yet promotes a belief that there is a common body of knowledge that every student should learn, in order to be a productive

member of American society. Hirsch's work on cultural literacy promotes the role of schools to spread this common body of knowledge to each student.
Examples: Modern Red Schoolhouse

Drama

Definition: *Program participants stage a written selection, interacting directly with the text and situating themselves within it.*
Description: This feature, by involving students in acting, brings a multisensory aspect to reading. Because dramatic response requires translating a visual medium into motor and oral media, it requires an element of interpretation, emphasizing the distinction between reader and text, specifically the subjective response that readers bring from texts.
Examples: Success for All, Early Intervention Reading

Echo or Choral Reading

Definition: *A variant of paced oral reading, except that children also read out loud along with the adult.*
Description: As with paced oral reading, because fluent reading is the goal, mistakes are not corrected and reading proceeds at a steady, natural pace.
Examples: Early Intervention Reading, Lightspan, School Development Program

Essays

Definition: *Students respond in a self-conscious, organized text to a reading, problem, situation, etc.*
Description: Essays are a form of writing more advanced than journals. They force writers to organize their thoughts and express them logically, coherently, even hierarchically. It raises the awareness that writing follows its own patterns of structure and that knowledge itself can be organized. (See also journals and creative writing.)
Examples: America's Choice, Early Intervention Reading, First Steps, Lightspan, School Development Program, Talent Development Career Academies

Highly Scripted Lessons

Definition: *Teachers instruct in a highly prescribed way from a script.*
Description: This may refer to scripted content and/or to defining the amount of time and sequence of specific instructional tasks.
Example: Success for All

Inquiry Learning

Definition: *An instructional method by which students use a variation of the scientific method of inquiry as a means to study a topic in depth, in which the goal is both deeper learning about the focus of the inquiry and the processes of inquiry as a learning method.*
Description: Inquiry is related to constructivist learning—encouraging deep learning around a limited number of concepts—and authentic instruction focusing on "real world problems." The use of inquiry is often limited, due to the amount and complexity of planning required of the teacher. An inquiry project involves multiple steps related to the scientific method. Typically it includes defining a question to study (e.g., "why are sunfish in the Potomac dying?"), gathering information about the topic to formulate a hypothesis (e.g. determining whether or not the

sunfish are dying in the Potomac, if so at what rate, and learning about issues related to sunfish that also relate to the Potomac), generating a hypothesis (e.g., "the sunfish are dying at a higher rate in 2000 than in 1999, because of increased carbon-monoxide related to increased rates of traffic on the beltway"), determining what information is needed to test the hypothesis, identifying how to collect that information, collecting and analyzing the data, and drawing conclusions about the hypothesis based on the inquiry.
Examples: Accelerated Schools, ATLAS

Interpreting/Discussion/Math

Definition: *Teacher facilitates discussions to encourage students to share their analyses of mathematical concepts with their peers.*
Description: Students discuss mathematical concepts between themselves and try to define ways of using these concepts in real-life situations. Teachers facilitate discussions enabling each student to express their views, and students may be broken into small groups to discuss the ideas among themselves.
Examples: Accelerated Schools, ATLAS, Modern Red Schoolhouse, Success for All, Talent Development Career Academies

Interpreting/Discussion/Reading

Definition: *Teacher-led class discussion of reading, with emphasis on meaning, interpretation, critical response, critical dialogue, self-expression, etc.*
Description: This feature is fairly advanced, and presupposes at least a certain level of comprehension. Look for it in Whole Language, student-centered interventions or interventions that target the critical literacy outcome. This feature deepens comprehension and critical response by involving children in a guided conversation, which requires a response and the ability to articulate the response coherently.
Examples: Accelerated Schools, ATLAS, Early Intervention Reading, First Steps, Lightspan, Success for All

Invented Spelling

Definition: *Children are taught basic spelling rules and are encouraged to write using those rules, without worrying about the correctness of the spelling.*
Description: This approach is used in a number of different programs. Its disadvantage is obvious, that is, that children are not learning (at least initially) to spell words correctly. The advantage to this approach, however, is that children are practicing writing in a rule-governed way. That is, they are generating words from rules, rather than from rote memory. Thus, when they are introduced to correct spelling and the more complicated and irregular rules of spelling, they are cognitively prepared for them.
Examples: First Steps, Lightspan

Journals

Definition: *Students record their thoughts and experiences in regular accounts, usually informal.*
Description: Journals are a way for students to practice the other crucial aspect of literacy: writing (reading is the pedagogically dominant first crucial aspect). By keeping journals, students gain comfort and familiarity with expressing themselves in a medium other than oral. The

relative informality of journal-keeping and the familiarity of content make writing less intimidating than other forms of writing, such as essays and creative writing. (See also essays and creative writing.)
Examples: America's Choice, Early Intervention Reading First Steps, Lightspan, Talent Development Career Academies

Learning Contract/Student

Definition: *Individualized contracted agreements for students on what they will accomplish for their education.*
Description: Learning contracts are a way for students and teachers to discuss and agree on not only learning outcomes but also specific steps to accomplish those outcomes. Learning contracts can help both teachers and students recognize and understand how and when students are not meeting pre-specified goals. In addition learning contracts are one way in which teachers can enforce the importance of out-of-classroom work.
Examples: America's Choice, Early Intervention Reading, Modern Red Schoolhouse

Manipulatives

Definition: *Objects and materials are used to teach abstract concepts.*
Definition: Subject-related objects and activities are used to demonstrate concepts. These activities may keep students engaged in the instruction and help them visualize the concepts, especially in math. Manipulative objects, such as cubes, geoboards, or colored rods, may be used to help students picture the concepts mentally and physically. For example, manipulatives can promote one-to-one correspondence, e.g. color identification, counting skills, and math concepts, to reinforce learning.
Examples: Accelerated Schools, Lightspan, Modern Red Schoolhouse, School Development Program, Success for All, Talent Development Career Academies

Meaning Context/Predicting

Definition: *Children are introduced to the story before they read, and are encouraged to predict the outcome or otherwise interact with story structures prior to and separate from the actual narrative experience.*
Description: This feature is common to many different interventions and is highly compatible with almost any approach. By focusing on meaning and structures, students are forced to bridge a number of different outcomes, including Decoding A & B, Comprehension, and Critical Literacy.
Examples: America's Choice, Early Intervention Reading, First Steps, Lightspan, Success for All

Multisensory Activity

Definition: *This approach emphasizes senses other than seeing and hearing to help students internalize the act of reading.*
Description: Humans have five senses but depend disproportionately on sight and hearing, at least in school. This feature usually means the inclusion of the tactile sense—using a finger to trace letters, or to run under a line of text as it is read, clapping along as words are read—but it can also be generalized into some form of creative movement, e.g., dancing, drama, etc.
Examples: Early Intervention Reading, Success for All

Pacing Oral Reading

Definition: *Adults read to children—one-on-one or in groups—with the children following along (guided perhaps by a finger running under the text as it is read).*
Description: Students struggling to read, if they only hear themselves reading, may not have any idea of what fluent reading actually sounds like. Slow speeds are not fluid, and fast ones can cause mistakes. Ideally, children associate written text with fluid spoken language.
Examples: Early Intervention Reading, Lightspan, School Development Program, Success for All

Paired Reading

Definition: *The program puts two people together (usually of different abilities) to read. The stronger partner helps the weaker read.*
Description: Usually the emphasis is not on error correction but rather helping with reading fluency. It was originally designed as a way of educating parents to read with their kids in a maximally productive way, but has since been extended to include paraprofessionals and even student peers.
Examples: Accelerated Schools, Early Intervention Reading, Lightspan, School Development Program, Success for All

Performance Assessment

Definition: *Students are given performance tasks to assess learning as a regular part of instruction.*
Description: The primary function is to give feedback to the teacher about the students' level of understanding or development to further plan rather than solely evaluative (for grades). This is often related to Reflective Practice, where teachers seek feedback on student learning in order to refine instructional methods as a means for achieving higher student outcomes.
Examples: Accelerated Schools, America's Choice, ATLAS, Lightspan, First Steps, Modern Red Schoolhouse, School Development Program, Talent Development Career Academies, First Steps

Problem-Solving

Definition: *Problem-solving is often used as both a rehearsal of skills already learned and application of newly learned concepts. Typically, the class receives whole class instruction followed by individual or group problem-solving activities to reinforce the instruction.*
Description: This is a common method in mathematics instruction involving solving word problems. Students solve word problems, usually after some kind of formal instruction, to practice what has been learned, build numeracy and math fluency, and apply math computation to real-world situations.
Examples: Accelerated Schools, America's Choice, ATLAS, Lightspan, Success for All, Talent Development Career Academies

Project-Based Instruction

Definition: *Students are assigned or select a project as part of formal instruction. Projects generally involve both the in-depth study of a topic and a summary or synthesis of what has been learned in some sort of presentation, such as a written report, an oral presentation, or the construction of a representational model.*

Description: A method common to upper elementary through high school classes across most subject areas. Project-based instruction often includes embedded content and process/performance lessons. Although students are often given a choice in selecting a project, a list of requirements or instructions usually accompanies the assignment.

Examples: Accelerated Schools, America's Choice, ATLAS, Lightspan, Modern Red Schoolhouse, Talent Development Career Academies

Reading Drills

Definition: *The program drills the participants on reading sub-skills, using specifically targeted, repetitive, and analytic exercises, e.g., flashcards with words all beginning with the same consonant.*

Description: Drills are a means of enabling students to practice and internalize what they have learned. While not the most glorified or appreciated of features, reading drills offer a way of strengthening students' skills in certain highly abstract, systematized areas, such as phonics and grammar.

Examples: Early Intervention Reading, Success for All

Scaffolding

Definition: *Teachers model a complex activity to show students how to perform the activity; then, the activity is repeated with less and less teacher input as students perform the activity independently.*

Description: This method enables children to learn how to do complex tasks. Simple directions may be insufficient to explain how to do such tasks. Scaffolding is used for more "high level" tasks and would make little sense, for instance, in a skills-oriented lesson such as phonics.

Examples: ATLAS, First Steps

Self-Selected Reading

Definition: *Students, rather than teachers, choose which books they read.*

Description: An approach compatible with student empowerment, self-selected reading dramatically increases the chances that children will like what they read, improving the chances of students habitually reading for pleasure. On the down side, if children choose books only from one genre, or consistently choose books that do not challenge them, then this approach may actually hinder reading outcomes. Often this is used in combination with other reading approaches.

Examples: America's Choice, First Steps

Silent Individual Reading

Definition: *Children have time of their own to read silently, usually scheduled daily.*

Description: Teachers may or may not circulate, providing structured tutorial/individualized guidance or simply answering incidental questions. A staple of Whole Language and student-centered approaches, silent individual reading gives children the chance to practice

independently what they have learned. Typically children may choose which materials they use, which again brings up the choice/comprehensiveness dilemma (see basal readers in the Structural/Organizational section).
Examples: Early Intervention Reading, First Steps, Lightspan, School Development Program, Success for All

Storytelling
Definition: *Teacher reads stories out loud to students, usually in a classroom setting, rather than in a tutorial setting.*
Description: Storytelling is a near-universal staple of early reading instruction. It has two primary benefits. It makes children aware of the benefits of reading—that it is fun, exciting, etc.—even as it models reading, e.g., what texts sound like when read aloud. It also enables students to respond to their content.
Examples: Early Intervention Reading, First Steps, Success for All

Worksheets/Workbooks
Definition: *Students fill out worksheets.*
Description: Usually skills-oriented, worksheets provide an inexpensive way for students to practice what they have learned. Their use may also free up teachers' time to concentrate on other tasks, such as small-group instruction.
Examples: Success for All, Accelerated Schools, America's Choice, School Development Program

Writing Mechanics
Definition: *This feature comprises activities that call attention to the rules and mechanics of writing.*
Description: Particular activities might include revising texts to make sure, for example, that all of the sentences have periods, and all of the sentences begin with a capital letter. Editing can range from simple and mechanical to more complex revisions.
Examples: Success for All, America's Choice, First Steps, School Development Program, Talent Development Career Academies

APPENDIX B

Reading Outcomes/Minnesota Learning Standards: Read, Listen, and View

Phonics/Early literacy skills/Vocabulary building	**Minnesota Standard**	**Standard Level**
• Pronouncing new words using phonic skills	Literal Comprehension	*Primary & Intermediate*
• Demonstrating techniques for learning new vocabulary	Literal Comprehension	*Primary*
• Demonstrating techniques for improving and expanding vocabulary, and demonstrate an age-appropriate reading rate	Literal Comprehension	*Intermediate*
• Showing evidence of an ongoing process for expanding vocabulary	Fiction	*Middle-Level*

Comprehension	**Minnesota Standard**	**Standard Level**
• Identifying main ideas and supporting details	Literal Comprehension Nonfiction Reading, Listening and Viewing Complex Information	*Primary & Intermediate,* *Middle-Level,* *High School*
• Retelling main events or ideas in sequence	Literal Comprehension	*Primary & Intermediate*
• Retelling a story, including major characters, setting, sequence of events, and conflict	Fiction	*Middle-Level*
• Using structural organizers within a selection to aid comprehension	Nonfiction	*Middle-level*

Applied Learning—transfer of skills—technical	**Minnesota Standard**	**Standard Level**
• Interpreting presentations of data	Literal Comprehension	*Primary*
• Summarizing ideas and information from visual presentations	Literal Comprehension	*Intermediate*
• Interpreting presentations of data in connection with other information in the text	Nonfiction	*Middle-Level*
• Showing an understanding of information from visual or graphic data	Technical Reading	*Middle-Level*
• Using presentations of data to understand scientific or mathematical information	Literal Comprehension	*Intermediate*
• Reading and applying technical instructions to perform an action	Literal Comprehension	*Intermediate*
• Knowing relevant technical vocabulary, use of tools, and safety procedures	Technical Reading	*Middle-Level*
• Applying step-by-step directions using appropriate tools and safety procedures	Technical Reading	*Middle-Level*

Applied Learning—transfer of skills - technical (Cont'd.)

The following are associated with doing one or two of the following tasks: a) Build or assemble from a plan; b) Operate maintain or repair from a technical manual; c) Analyze a situation based on technical information; and d) Create a design based on technical reading

• Identify and select relevant information for completing the application	Technical Reading, Listening and Viewing	*High School*
• Interpret specialized vocabulary	Technical Reading, Listening and Viewing	*High School*
• Interpret information found in charts, graphs, tables, and other visual and graphic representations of data	Technical Reading, Listening and Viewing	*High school*
• Apply step-by-step procedures	Technical Reading, Listening and Viewing	*High school*

Interpretation	**Minnesota Standard**	**Standard Level**
• Understand ideas not explicitly stated	Interpretation and Evaluation	*Primary & Intermediate*
• Make predictions based on information in the selection	Interpretation and Evaluation	*Primary*
• Prediction logical cause-and-effect sequences	Fiction	*Middle-level*
• Draw conclusions based on information in the selection	Interpretation and Evaluation	*Primary*
• Interpret figurative language	Fiction	*Intermediate*
• Interpret effects of persuasive visual messages	Nonfiction	*Intermediate*
• Interpreting literal and figurative language and imagery	Fiction	*Middle-Level*

Evaluation	**Minnesota Standard**	**Standard Level**
• Compare and contrast elements of the story	Interpretation and Evaluation	*Primary*
• Compare and contrast setting, idea, or actions	Interpretation and Evaluation	*Intermediate*
• Compare and contrast information on the same topic from different types of sources	Nonfiction	*Middle-Level*
• Distinguish facts from opinions	Interpretation and Evaluation	*Primary*
• Distinguish facts from opinions in nonfiction selections	Interpretation and Evaluation Nonfiction	*Intermediate* *Middle-Level*
• Distinguish facts from opinion, fiction from nonfiction or both	Reading, Listening and Viewing Complex Information	*High School*
• Identify relevant background information	Reading, Listening and Viewing Complex Information	*High School*
• Summarize ideas and identify tone in persuasive, fictional, and documentary presentations	Interpretation and Evaluation	*Primary*

Evaluation (Cont'd.)

• Identifying differences in points of view of the authors when given more than one selection on the same topic	Nonfiction Reading, Listening and Viewing Complex Information	*Middle-Level* *High School*
• Identify bias, point of view, and author's intent	Reading, Listening and Viewing Complex Information	*High School*
• Categorizing events, behavior or characters	Fiction	*Middle-Level*
• Evaluating fiction according to pre-established criteria	Fiction	*Middle-Level*
• Analyze and evaluate the credibility of evidence and source, the logic of reasoning, and how the type of communication shapes or limits information	Reading, Listening and Viewing Complex Information	*High School*

APPENDIX C

Math Outcomes/Minnesota Learning Standards: Mathematical Applications

Numeracy, Basic Operations, and Problem Solving

Minnesota Standard: Number Sense	**Standard Level**
A student shall use number relationships to represent information and solve problems by:	
• Using whole numbers to represent numbers in more than one way, count and order, name and locate, measure, and describe and extend pattern;	*Primary*
• Demonstrating an understanding of place value, number relationships, relative size, and reasonableness of answers in problem-solving situations;	*Primary*
• Solving problems and justifying thinking by selecting appropriate numbers and representations using operations, patterns, and estimation; generating multiple solutions; organizing data using pictures and charts; and using concrete objects, diagrams, or maps to solve simple problems involving counting, arrangements or routes.	*Primary*
A student shall:	
• Demonstrate understanding of concepts of place value, variables, and equations; when and how to use number operations; when and how to use a variety of estimation strategies; addition, subtraction, and multiplication of single-digit multipliers of powers of ten; and the reasonableness of calculator results;	*Intermediate*
• Use number concepts and a variety of math operations to represent information and solve problem;	*Intermediate*
• Solve a variety of multiple-step problems using number relationships and properties, number patterns, and appropriate computation or estimation procedures;	*Intermediate*
• Generate and describe more than one method to solve problems;	*Intermediate*
• Use whole numbers, simple fractions, and money amounts to quantify, label, measure, and locate numerical information;	*Intermediate*
• Represent real-life situations mathematically;	*Intermediate*
• Represent patterns using words, pictures, and numbers;	*Intermediate*
• Use lists or diagrams to solve counting and arrangement problems.	*Intermediate*
• Demonstrate understanding of number concepts including place value, exponents, prime and composite numbers, multiples, and factors; fractions, decimals, percents, integers, and numbers in scientific notation that translate among equivalent forms; and compare and order numbers within a set;	*Middle-Level*
• Solve a variety of problems by representing numbers efficiently, selecting appropriate, operations selecting appropriate methods to estimate or compute, and generating and describing more than one method to solve problems;	*Middle-Level*
• Analyze and justify operations and methods used and evaluate the reasonableness of computed results to problems with proposed solutions;	*Middle-Level*
• Apply proportional reasoning to solve a variety of problems using rates, ratios, proportions, and percents	*Middle-Level*
• Create a real-world communication that demonstrates the ability to use a variety of numbers in context.	*Middle-Level*

Math Concepts: Geometric Reasoning, Algebraic Reasoning and Measurement

Minnesota Standard: Shape, Space and Measurement **Standard Level**

A student shall apply concepts of shape, space, and measurement to solve problems involving two- and three-dimensional shapes by demonstrating an understanding of:

- Patterns by describing, extending, and completing existing patterns; creating new patterns; representing spatial patterns pictorially, numerically, or both; and identifying, creating, or identifying and creating symmetrical patterns. *Primary*
- Measurement, given familiar objects, to identify type of measurement required, estimate measurement, select appropriate tools and units of measurement, measure accurately, and use measurements to order a group of objects according to size. *Primary*
- Familiar two- and three-dimensional shapes in real-world contexts; drawing, guiding, or drawing and building familiar shapes; sorting and classifying shapes; and predicting the results of flipping, sliding, or turning a shape. *Primary*
- Geometric terms used to describe spatial relations. *Primary*

A student shall:

- Describe and analyze two- and three-dimensional shapes and spaces using appropriate whole and partial units, including metric, to measure length, time, weight, volume, temperature, angle, and area, and using names and properties of common two- and three-dimensional shapes. *Intermediate*
- Describe and compare two- and three-dimensional geometric figures existing in the physical world. *Intermediate*
- Analyze and create new shapes by combining, dissecting, or transforming existing shapes *Intermediate*
- Extend or create geometric patterns to solve problems. *Intermediate*
- Represent a three-dimensional space in two-dimensional view. *Intermediate*
- Measure, including identifying type of measurement required, selecting appropriate tools and units of measurement, and measuring accurately. *Intermediate*
- Estimate measurements by using appropriate units and comparisons to known objects or quantities. *Intermediate*
- Use maps or graphs to determine the most efficient routes. *Intermediate*
- Demonstrate understanding of basic concepts of coordinate systems, by knowing precise mathematical names and properties of two- and three- dimensional shapes, converting common measurement units within the metric system and customary systems, and understanding how properties of shapes affect stability and rigidity of objects. *Middle-Level*
- Recognize and describe shape, size, and position of two- and three-dimensional and the images of the objects under transformations. *Middle-Level*
- Create complex designs using transformations and tilings to generalize properties of shapes. *Middle-Level*
- Connect geometric concepts and use them to test conjectures and solve problems, including distances (rational and irrational), the Pythagorean Theorem, similarity and congruence, slope, properties of polygons and polyhedra, and symmetry. *Middle-Level*
- Measure length, mass, perimeter, and area of quadrilaterals and circles, surface area, and volume Of solids and angels, including determining type of measurement needed (exact, approximate, derived), selecting appropriate measurement tools and units, and measuring to the appropriate accuracy. *Middle-Level*

Math Concepts: Geometric Reasoning, Algebraic Reasoning and Measurement (Cont'd.)

Describe changes in the dimensions of figures affect perimeter, area, and volume.	*Middle-Level*
Use vertex-edge graphs to solve problems.	*Middle-Level*
Demonstrate understanding of the characteristics of geometric figures in both two and three dimensions, including reflections, rotations, and translations; congruence and similarity; perimeter, area, and volume; distance; scaling; and symmetry.	*High School*
Use spatial visualization to model geometric structures and solve problems.	*High School*
Analyze characteristics of shape, size, and space in art, architecture, design, or nature.	*High School*
Translate between numerical relationships and geometric representations to analyze problem situations, scale models, or measurement.	*High School*
Use properties of shape, location, or measurement to justify reasoning in a logical argument	*High School*
Demonstrate understanding of measurement accuracy, error, and tolerances.	*High School*

Math Concepts: Data Analysis, and Probability and Statistics

Minnesota Standard: Chance and Data Handling *A student shall:*	**Standard Level**
Demonstrate understanding of how to find range, mean, and median simple concepts of likelihood including impossible, unlikely, equal chance, likely, certain, fair, and unfair; and information displayed in graphs tables, and charts.	*Intermediate*
Answer questions by collecting and organizing data, representing data, and communicating results	*Intermediate*
Conduct experiments involving uncertainty including listing possible outcomes; tally, record, and explain results; and use the results to predict future outcomes.	*Intermediate*
Describe patterns, trends, or relationships in data displayed in graphs, tables, or charts.	*Intermediate*
Represent data using at least two graphic forms.	*Intermediate*
Evaluate and solve problems, including calculating basic measures of center and variability, to demonstrate understanding of basic concepts of probability and calculate simple probabilities.	*Middle-Level*
Formulate a question and design an appropriate data investigation.	*Middle-Level*
Organize raw data and represent it in more than one way.	*Middle-Level*
Analyze data by selecting and applying appropriate data measurement concepts.	*Middle-Level*
Critique various representations of data.	*Middle-Level*
Devise and conduct a simulated probability situation.	*Middle-Level*
Predict future results based on experimental results.	*Middle-Level*
Demonstrate understanding of the statistical concepts of measures of center, variability, and rank; differences between correlation and causation; sampling procedures; line or curve of best fit; and concepts related to uncertainty of randomness, permutations, combinations, and theoretical and experimental probabilities.	*High school*

Math Concepts: Data Analysis, and Probability and Statistics (Cont'd.)

- Investigate a problem of significance by formulating a complex question, designing a statistical study, collecting data, representing data appropriately, using appropriate statistics to summarize data, determining whether additional data and analysis are necessary, drawing conclusions based on data, and communicating the results appropriately for the intended audience. *High School*
- Analyze and evaluate the statistical design, survey procedures, and reasonableness of conclusions in a published study or article. *High School*
- Use probability experiments, simulations, or theory-to-model situations involving uncertainty. *High School*
- Make predictions based on the model. *High School*

Math Concepts: Algebra

Minnesota Standard: Patterns and Functions/Algebraic Patterns **Standard Level**
A student shall:

- Analyze patterns and use concepts of algebra to represent mathematical relationships, including demonstrating understanding of the concepts of variables, expressions, and equations. *Middle-Level*
- Recognize, analyze, and generalize patterns found in linear and nonlinear phenomena; data from lists, graphs, and tables; number theory; sequences; rational numbers; and formulas. *Middle-Level*
- Represent and interpret cause and effect relationships using algebraic expressions, equations and inequalities, tables and graphs, verbal descriptions, and spread sheets. *Middle-Level*
- Connect verbal, symbolic, and graphical representations; identify constraints; translate algebraic expressions into equivalent forms; and propose and justify solutions in problem situations;. *Middle-Level*
- Use properties of mathematics to informally justify reasoning in a logical argument. *Middle-Level*

A student shall demonstrate the ability to identify rates of change in different models of linear relationships and know characteristics of polynomial, exponential, and periodic functions and relations; functional notation; and terminology by:

- Translating between real-world situations and mathematical models using graphs; matrices; data tables, spread sheets, or both; verbal descriptions; and algebraic expressions. *High School*
- Generalizing patterns and building mathematical models to describe and predict real situations including linear, exponential growth and decay, and periodic. *High School*
- Using algebraic concepts and processes to represent and solve problems involving variable quantities. *High School*
- Using properties of algebra to justify reasoning using a logical argument. *High School*

Advanced Math: Discrete Math

Minnesota Standard: Discrete Math	**Standard Level**
A student shall use discrete structures to demonstrate mathematical relationships and solve problems by:	
• Describing the difference between discrete and continuous models of data and permutations, combinations, and other principles of systematic counting.	*High School*
• Translating between real-world situations and discrete mathematical models using vertex-edge graphs, matrices, verbal descriptions, and sequences.	*High School*
• Analyzing and modeling iterative and recursive patterns.	*High School*
• Analyzing and solving problems by building discrete mathematical models, developing and comparing algorithms or sequences of procedures, and determining whether solutions exist, the number of possible solutions, and the best solutions.	*High School*
• Using properties of mathematics to justify reasoning in a logical argument.	*High School*

Advanced Math: Technical Applications

Minnesota Standard: Technical Applications	**Standard Level**
A student shall:	
• Demonstrate a knowledge of computational technologies; how to use complex measurement equipment for several systems; how to convert between measuring systems; how to measure to scale; how to calculate quantities using algebraic formulas; how to read and interpret information in complex graphs tables, and charts; scientific and exponential notation used in complex systems; trigonometric applications appropriate to technical situations; and fundamental geometric constructions or calculations used in drafting or construction.	*High School*
• Create a set of plans to design or modify a complex structure, product, or system by researching background information, calculating mathematical-specifications, and developing a materials list that matches mathematical-specifications.	*High School*
• Construct a complex structure, product, or model to mathematical-specifications.	*High School*
• Analyze existing structure, product, or system for purposes of maintenance, repair, trouble shooting, or optimizing function.	*High School*

APPENDIX D

Minnesota Learning Standards: Inquiry

Data categorization, classification and recording *Primary*

A student shall demonstrate the ability to categorize, classify, and record information by:

- Gathering information from media sources, direct observation, interviews, and experiment or investigation to answer a question;
- Recording the gathered information;
- Displaying the gathered information using the appropriate format; and
- Explaining the answer to the question.

Media, observation, and investigation *Intermediate*

A student shall demonstrate the ability to answer a question by gathering information from:

- Direct observations or experiments with a variable, including framing a question; collecting, recording, and displaying data; identifying patterns; comparing individual findings to large group findings; and identifying areas for further investigation;
- Media sources, including selecting a topic and framing a question; accessing information from any or all of electronic media, print, interviews, and other sources; recording and organizing information; and reporting findings in written, oral, or visual presentation; and
- Direct observation and interviews, including identifying a topic or area for investigation, writing a detailed description of the observation, conducting an interview with follow-up questions or designing and conducting a survey, recording and organizing information, and evaluating the findings to identify areas for further investigation.

Direct observation *Middle-Level*

A student shall demonstrate the ability to gather information to answer a scientific or social science question through:

- Direct observations, including framing a question, collecting and recording data, displaying data in appropriate format, looking for patterns in observable data, relating findings to new situations or large groups findings, answering a question or presenting a position using data, and identifying areas for further investigation; and
- Direct observations, interviews, or surveys, including framing a question; collecting data through observation, interviews, or surveys; recording and organizing information; and evaluating the question based on findings.

Accessing information *Middle-Level*

A student shall access information and use a variety of sources to answer a question or support a position by:

- Generating a question to be answered or a position to be supported through investigation;
- Using electronic media or other available means to access relevant information;
- Determining how to record and organize information;
- Gathering information from multiple sources;
- Evaluating the relevance of the information; and
- Answering the question or supporting a position by synthesizing information.

Controlled experiments *Middle-Level*

A student shall design and conduct a controlled experiment or investigation and interpret the results by:

- Using relevant information to generate a hypothesis or frame a hypothesis or frame a question in a given topic;
- Defining the controls, variable, and sample size or number of repetitions;
- Setting up a method to test the hypothesis;
- Determining how to record and organize data;
- Conducting experiment and record data;
- Analyzing data and evaluating the hypothesis; and
- Identifying areas for further investigation.

Complete one of the below:

Math Research

A student shall design and conduct an investigation on a mathematical topic by:

- Selecting and refining a topic through research
- Formulating generalizations about the topic
- Documenting insights gained during the investigation
- Connecting new concepts to familiar ideas in mathematics
- Using mathematical properties to support conclusions
- Communicating findings for an audience outside of mathematics

History of Science

A student shall demonstrate understanding of the interaction between social, economic, technological, and environmental factors and the occurrence of varied major scientific advances in recorded history by:

- Gathering information on one major scientific breakthrough
- Investigating and analyzing the social, economic, technological, environmental context in which a scientific breakthrough occurs
- Analyzing the immediate and long-term effect of the scientific breakthrough in any or all social, economic, technological, and environmental contexts

History Through Culture

A student shall demonstrate understanding of historical periods, including major events, conflicts, and leaders of a historical period, through investigating the cultural expressions of the period by:

- Interpreting ideas from artistic expressions to compare representations of historical period to selected philosophies, events or conflicts, and people and their contributions
- Gathering information and analyzing selected cultural expressions of a period, including major writings, publications, or both; artistic works; architecture; technology; and daily life and social customs

World History and Cultures

A student shall:

- Demonstrate understanding of the significance of key people, events, places, concepts, and themes in the historical development of one or more world cultures by:
  1. A survey of world history including early civilizations, classical traditions, major empires, and institutions; expansions of exchange and encounter, intensified hemispheric interactions, and the first global age; the age of revolutions; and the twentieth century; or
  2. A comprehensive, in-depth focus on a single culture, nation, movement, or time period.
- Investigate and analyze cause and effect relationships among issues, events, and major historical developments in at least one culture, nation, movement, or time period
- Investigate and describe the impact of at least one theme on other cultures, nations, movements, or time periods.

Recorders of History

A student shall demonstrate understanding that historical knowledge is the result of decisions made by recorders of history, including an understanding of events in a chronological framework, the factors influencing decisions made by recorders of history, and the types of information sources by:

- Analyzing two or more accounts of the same historical event recorded in different time periods; comparing and contrasting the accounts; and explaining the differences in terms of availability and use of sources, societal influences on the recorder, and purpose of the account, if known
- Recording the history of an event using several primary sources, including identifying factors that influence the recorder of the event and using appropriate validation procedures

Issue Analysis

A student shall research an issue and evaluate proposed positions or solutions by:

- Gathering information on past contemporary issues
- Identifying relevant questions or a range of points of view
- Summarizing relevant background information
- Examining information from each source for bias and intended audience
- Identifying areas of conflict, compromise, or agreement among various groups concerning the issue
- Evaluating multiple positions and proposed solutions for the issue, including analyzing conclusions, arguments, and supporting evidence; identifying motives of groups or individuals; analyzing feasibility and practicality; identifying impact on policies; comparing alternative solutions; and projecting consequences.

Research Process ***High School***

Complete one of the below

Research Process

A student shall use primary research techniques of surveys, structured and unstructured interviews, observations, questionnaires, and access secondary sources in multiple ways to:

- Refine a topic into a clear statement of a research problem with subproblems
- Evaluate a research problem for feasibility
- Create a plan for collecting and interpreting data
- Write a review of background information based on a survey of related literature from a variety of sources including identifying key issues, and identifying relevant historical and contextual background
- Collect and interpret primary data
- Discuss research findings, including describing research problems, describing the findings from a survey of literature, presenting primary data, interpreting and analyzing information, and formulating possibilities for further research

Social Science Processes

A student shall access sources of social science information and data to:

- Formulate a question about a historical event, issue, or interpretation of a concept
- Create a plan for collecting and interpreting data
- Evaluate a research problem for feasibility
- Gather information through primary research techniques of observations, interviews, surveys, or experiments
- Gather background information based on a survey of related literature form a variety of sources including identifying key issues and relevant historical and contextual background
- Discuss research findings, including describing issues, describing the findings from a survey of literature; presenting primary data; identifying bias and context of data or findings; examining how the time period and location of data source affect the data; examining limitations of the investigation, research process, or findings; and formulating possibilities for further research.

Research and Create a Business Plan

A student shall develop and implement a plan to start a business or an organization to demonstrate an understanding of relevant scientific, economic, marketing, and sales principles; how the business or organization functions within a larger context; the potential impact of the business or organization on people and communities; and human resources management through:

- Gathering information by keeping records; using market research; tracking markets; using computers, telecommunications, and satellite technology; using a variety of sources of information; and utilizing human resources
- Developing a business plan by conducting a feasibility study, producing a cost and benefit analysis, conducting a resource assessment, and identifying alternative solutions to problems
- Implementing a plan that communicates information regarding decisions; applies human relations skills; applies relevant and useful mechanical and technical skills; uses marketing and sales techniques; integrates economic, marketing, sales, and technical aspects with sound environmental practices; and analyzes the effectiveness of the plan.

Market Research

A student shall investigate a product through market research by:

- Conducting secondary research to investigate a market need or problem
- Defining a marketing problem
- Conducting market research using at least two of the following methods: direct mail survey, telemarketing survey, personal interview, discussion group, panels, sampling, observations, or market analysis
- Correlating, tabulating, and reporting findings
- Analyzing the viability of product, price, place, and promotion based on research findings

Case Study

A student shall use observation to study human interaction, learning, or development including theories of human behavior, learning, or development; methods and techniques of primary research; and legal and ethical procedures related to research by:

- Refining a topic into a clear statement of a research problem with subproblems
- Creating a plan for collecting data including evaluating feasibility, and establishing a process for conducting observations and recording descriptions
- Gathering and analyzing data
- Communicating a description of any or all of the key scenes, people, dialogue, and places; a comparison of the findings to theories of human interaction, learning. Or development; conclusions based on the findings; and an identification of implications for further study.

New Product Development

A student shall research, develop, and test a new product to demonstrate an understanding of needs analysis; specific materials or technologies; material processing or design techniques, or both by:

- Researching the need and the market
- Designing a new or improved product that meets the need
- Creating the new or improved product
- Testing and evaluating the product
- Assessing the impact of production, use, and eventual disposal of the product on the environment, society, and health, as applicable.

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